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How could knowledge of Sensemaking during Organizational
Change contribute to the investigation of how sense is made of
Organizational Performance?

School of Management

MRes: 2010 - 2011

Supervisors: Dr. Pietro Micheli & Prof Mike Bourne

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ABSTRACT

Managers and organizational stakeholders are confronted by a range of stimuli, emotions, events, data, paradoxes and ambiguities in endeavouring to understand and make sense of change and the performance of their organizations. However, there is virtually no literature available on sensemaking within organizational performance. Historically sensemaking literature has focused on unusual events, disasters and high reliability settings but there is now a sizeable body addressing sensemaking in strategic organizational change. This literature has been systematically reviewed because of its proximity to organizational performance and in order to assess how sensemaking in organizational performance could be investigated.

Sensemaking in individuals is triggered by the unusual and confounding and is concerned with how people construct meaning from this. While sensegiving is about the role played by leaders, or stakeholders, in generating, articulating and “selling” a construction or interpretation of events emerging from their own sensemaking process. “Mindfulness” can be thought of as how sensemaking is realised and is about responding rather than reacting while using information, attentiveness and clues to make sense of what is happening.

The sensemaking studies reviewed are dominated by work with middle managers who are seen by the authors as key organizational change agents. Organizational actors come to sensemaking through mental maps, or schemata that can be re-configured through the sensemaking process often as a way of addressing paradox or equivocation. The view of sensemaking as inter-subjective, discursive and narrative dominates giving scope to managers to facilitate the process. Sensegiving and sensemaking intertwine dialectically in a process which sees sensemaking informing sensegiving and vice versa. There is insufficient information on mindfulness and change to be able to assess it.

In conclusion there are sufficient similarities between the processes of organizational change and organizational performance management to warrant its investigation from an inter-subjective, discursive and narrative sensemaking perspective.

Keywords:

Discursive, Interpretative, Inter-subjective, Mindfulness, Schema, Sensegiving,

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1 INTRODUCTION

“The little girl had the making of a poet in her who, being told to be sure of her meaning before she spoke, said: ‘How can I know what I think until I see what I say?’”

(Wallis, 1926, p.106 cited in Weick 1995 p. 12)

“As individuals enact their beliefs they also make sense of them

(Thurlow and Mills 2009 p. 471).

During my progress on this dissertation inner city areas of England experienced rioting on a scale not seen for nearly 30 years. As the flames died down and sirens quietened politicians competed to make sense of events. Given that sensemaking has a retrospective perspective (Weick 1995) and often involves re-configuring one’s mental map (Bartunek 1984) this would be a confoundingly difficult task especially as politicians thrive on trading certainties. The challenges would be enhanced by the immense amount of background noise on the subject and demands for a quick and decisive reaction against a sea of conflicting opinions and contradictions.

For organizational actors the challenge is similar. The volatile combination of personality, anxiety, emotion, elation and ambition come head to head with the demands of the delivery of performance in a complex organization that makes tracing how people construe organizational performance fraught with difficulty. Yet the history that organizations write for themselves is likely to display a retrospective logic that denies the reality of uncertainty and confusion that can be a manager’s lived daily experience. My initial idea was to explore the literature to discover how managers make sense of organizational performance but there is barely any literature covering this question. Much work on sensemaking has covered the management of risk and its deployment in high reliability organizations (e.g. Weick 1993) although there is a growing body of literature that examines its presence in moments of strategic organizational change (Maitlis and Sonenshein 2010). It is to this topic that I have turned as a proxy in order to

gain a significantly robust understanding of sensemaking to be able subsequently to research its application and presence within 3rd sector organizational performance management, my ultimate area of interest.

Sensemaking is not an easy subject to pin down and, as Vaara finds, “studying (it) is by no means unproblematic as it involves dealing with context specific, evolving and often contradictory interpretations” (Vaara 2003 p. 868). For the purposes of this work I have included within it the concepts of “mindfulness” and “sensegiving”. “Sensegiving” because of its interdependence with “sensemaking” (Gioia and Chittipeddi 1991) and “mindfulness” because of the “quality of attention” it offers within sensemaking (Weick and Sutcliffe 2006).

Sensemaking is an avowedly social constructionist process (Weick 1995) in which people respond to the unusual, the confusing, the unexpected and change by using cues from the environment and their mental maps to construct meaning and literally make sense of events (Weick 1995). Although interpretation forms part of sensemaking Weick distinguishes it on the basis that interpretation rests on the existence of a known object or event to be interpreted whereas sensemaking places a construction on the novel and unexpected by using cognitive raw material (Weick 1995). Karl Weick, (Rensis Lickert Distinguished Professor of Organizational Behavior and Psychology at the University of Michigan) has dominated the literature and debate on sensemaking in organizations since the subject’s first appearance in the late sixties and early seventies. It evolved over the years from the social psychology of organising (Weick 1979) through the recognition of organizations as “interpretative mechanisms” (Daft and Weick 1984) and on to the analysis of sensemaking in accidents and disasters and organizational change. It carries within it a tension between individual and collective sensemaking with the literature on sensemaking on organizational change firmly in the socialised sensemaking camp. Writers may differ on the details of the process but the generation and sharing of mental maps lies at its core.

Underpinning sensemaking is the notion, derived from Weick (1995), that organizations are enactments of their environment. Put simply this means that organizations come into existence by people acting in concert on their interpretations of environmental events.

An example of this is the making of laws by legislative bodies (Weick 1995). But, enactment is a manifold process exhibited in the way that organizational artefacts, services and products come to be reflections of environmental interpretation. There is a simple dialectic at play here through which the environmental interpretation becomes a shared reality which when acted upon is re-interpreted to deliver a revised construction.

Sensegiving is concerned with the role played by leaders in generating, articulating and “selling” a construction or interpretation of events emerging from their own sensemaking. It came into prominence in Gioia and Chittipeddi (1991) who describe the interdependence of sensemaking and sensegiving in which leader sensegiving informs organizational actor’s sensemaking and vice versa. Here the influence of role and power come into play as it is always possible that a senior manager’s “sensemaking” is unwittingly privileged over that of subordinate staff.

Within sensemaking “Mindfulness” can be thought of as how sensemaking is realised. It is about the capacity of people to observe what is happening to them cognitively and emotionally both internally and through their environment. It rests on exercising our capacity to decentre and temporarily detach ourselves from an emotional reaction in order better to listen to our thoughts and emotions. Reaction is avoided and response and recognition prioritised. It originates from Buddhism (Weick and Puttman 2006) and informs meditative practice. Assuming, in the 1980’s, that meditation and management could not appear in the same sentence Ellen Langer (1989) reinterpreted mindfulness to make it more palatable to the corporate mind and successfully introduced it to organizational theory and practice.

In the context of organizational change the place of sensemaking is described by Gioia and Chittipeddi as “the meaning construction and reconstruction by the involved parties as they attempt to develop a meaningful framework for understanding the nature of the intended strategic change” (Gioia and Chittipeddi 1991 p. 442). In effect a process for addressing the uncertainty, paradox and ambiguity wrought by change that organizational actors experience but do not necessary control.

This study explores sensemaking in the context of mainly strategic organizational change firstly by positioning it ontologically, then describing its founding principles largely through the work of Weick. It moves on to identify sensemaking practices operating during organizational change (e.g. Rouleau 2005). Emerging strongly from these are the inter-subjective and discursive practices that provide the vehicles for socialised sensemaking. This theme of discourse, conversation and narrative within sensemaking is then picked up and examined conceptually. In discussion I argue that this same theme offers the opportunity for a discursive and narrative perspective on how organizational actors make sense of organizational performance in a way that complements the systems of performance measurement and interpretation already practiced.

1.1 The Sections

Positioning the Field of Inquiry – Beginning with organizations as interpretative mechanisms this section briefly charts the development of the sensemaking literature in the context of organizational change and its ontology. Sensegiving and Mindfulness are briefly covered. Practices in sensemaking are described and the review question formulated.

Methodology – This sets out the purpose of a systematic review and describes the search through the literature to arrive at the cohort of materials. How these materials were assessed and analysed is then described.

Descriptive Findings – The major sensemaking and sensegiving themes, and other key features, of the materials are categorised.

Conceptual findings – This sections draws out the predominantly inter-subjective, discursive and narrative aspects of sensemaking and sensegiving.

Discussion – The discussion returns to the review question to consider the applicability of sensemaking to the interpretation of organizational performance. It considers which

aspects of sensemaking practice could inform organizational actors discourse on organizational performance.

2 POSITIONING THE FIELD OF INQUIRY

2.1 Introduction

This section reviews the literature in the three areas of sensemaking, mindfulness and sensegiving during strategic organizational change. The intention is to gain knowledge and understanding of the processes at work in order to investigate them eventually in the context of how sense is made of organizational performance. Consequently the investigation of the literature focuses on sensemaking and related topics rather than organizational performance management. Literature on performance management is however referred to in the discussion (Chapter 6) but this is on the basis of knowledge acquired during my preliminary scoping study rather than being the product of a systematic review.

Sensegiving and sensemaking could be described as processes whereas mindfulness equates to the “quality of attention” (Weick and Sutcliffe 2006) and the states of mind of organizational actors. Essentially sensemaking is concerned with arriving at an individual or collective construction of events whereas sensegiving is a product of sensemaking in which a construction already arrived at is articulated and communicated. Mindfulness, in this context, is concerned with how organizational actors approach sensemaking.

This section traces a path through the sensemaking literature that first explores its origins and then describes how it has addressed organizational change. It also briefly covers Mindfulness and Sensegiving. The major focus is on sensemaking practices because these arguably point to activities that could be investigated in the context of making sense of organizational performance. It concludes by suggesting that the inter-subjective and discursive aspects of sensemaking should be taken forward be explored in more detail as relevant practices for gaining knowledge of how sense is made of organizational performance.

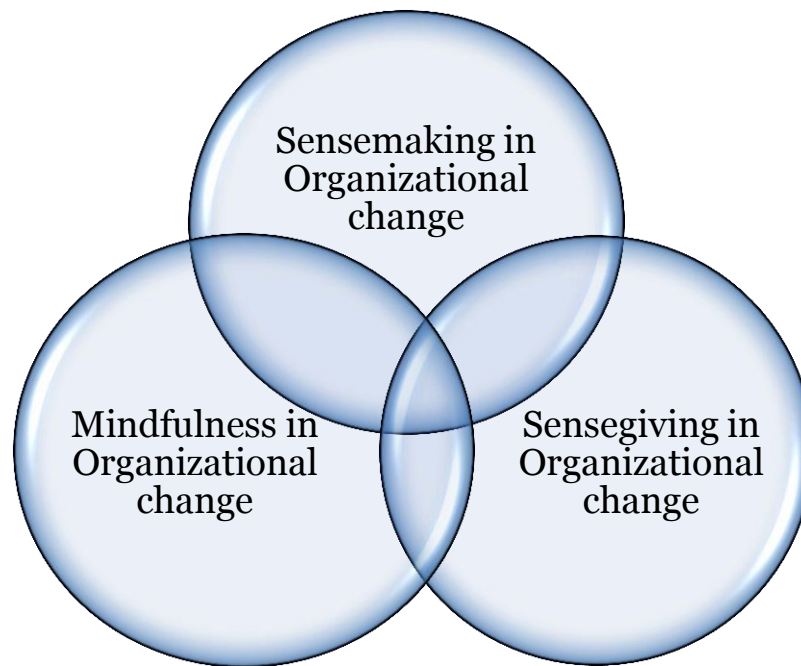


Figure 1 - The Field of Inquiry

2.2 Sensemaking in organizational change

The sensemaking literature initially focused on unexpected events, disasters (Weick 1993) and operations in high reliability settings such as aircraft carrier flight decks and hospital emergency rooms (Weick and Sutcliffe 2003, Weick and Roberts 1993,). It has had a relatively short history emerging as it did from the social psychology of organizing in the late 1970's (Weick 1979). Later it moved into the areas of strategic change (Gioia and Chittipeddi 1991) and strategic planning (Balogun 2006). More recently it has emerged in a number of other settings such as corporate social responsibility (Basu and Palazzo 2008) and sensitivity to weak organizational signals in managing risk (e.g. Rerup 2009). For this review the literature on sensemaking has been picked up at the point where a distinct body of work on sensemaking in organizational change is emerging. This section starts by defining sensemaking and placing its emergence in work on organizations as interpretative mechanisms. Weick's work in developing sensemaking is described and followed by the ontological framing of sensemaking as a process. Finally this section identifies the sensemaking and

sensegiving practices described in the literature on sensemaking and organizational change.

2.2.1 Defining Sensemaking

The definitions used are from the literature on sensemaking in organizational change. In summary all describe a transient process of transforming unusual events, cues and artefacts of change into meaning that can be shared and acted on. Several refer to, or adapt, the seven characteristics provided by Weick (1995) and which are summarised later.

- An “interpretative process in which actors influence each other through persuasive or evocative language” (Maitlis and Lawrence 2007 p.57).
- "'Sensemaking' has to do with meaning construction and reconstruction by the involved parties as they attempted to develop a meaning framework for understanding the nature of the intended strategic change" (Gioia and Chittipeddi 1991 p.442).
- “Sensemaking is the process of social construction that occurs when discrepant cues interrupt individual’s ongoing activity, and involves the retrospective development of plausible meanings that rationalize what people are doing” (Maitlis and Sonenshein 2010 p.551).

All are underpinned by a social constructionist epistemology. They describe the inter-subjective, conversational and narrative elements while including aspects of social cognition, enactment, retrospection and plausibility. A small degree of divergence is evident in the emphasis that some give to the cognitive, interpretative or social aspects of sensemaking.

2.2.2 Organizations as interpretative mechanisms

This idea that organizations exist as a product of their ability to interpret, influence and enact their environment is fundamental to sensemaking (Daft & Weick 1984, Weick 1995). Orton’s (2000) simple description of enactment is that “the organization creates events to which it must then respond” (p.220) via reorganization or change depending

on the scale of the event. Organizations are therefore “interpretive systems” (Daft & Weick 1984) defined by how they interpret and engage with their environment. From this perspective organizations have no independent existence outside of the social constructs of their members. Three key articles articulate the interpretative nature of organizations within sensemaking (Daft & Weick 1984, Bartunek 1984, Isabella 1990).

Daft & Weick (1984) make four assumptions about organizations:

1. “Organizations are open systems that process information from the environment” (Daft & Weick 1984 p.285). This means developing mechanisms sensitive enough to manage nuanced information from the environment
2. Although individuals inevitably do the interpreting it is assumed that organizational interpretation goes beyond individuals. Organizations are capable of retaining “knowledge, behaviors, mental maps, norms and values over time. “Managers may not agree about their perception but the thread of coherence among them is what characterizes organizational interpretations”.(Daft & Weick 1984 p.285)
3. Interpretation is managed strategically by a relatively small group at the top of the organization. (Daft and Weick 1984)
4. Organizations each develop their own way of knowing the environment (Daft and Weick 1984 p. 286)

These assumptions lead Daft and Weick to the formation of two dimensions that govern how and what organizations interpret and the strategic value they derive from their interpretations. The first is managers’ beliefs about how readily the organizational environment can be analysed. The second covers how far the organization ventures into the environment in order to understand it. The organization’s beliefs about, and occupation of, its environment influence its capacity to shape it. In the authors’ view the more an organization moves along these dimensions to a converged construction of the environment the less equivocation there is about the available data. In other words its capacity to “make sense” of its environment is what establishes it as an organization.

Bartunek (1984) addresses changes to the interpretative schemas of a world- wide religious order. Although these changes were a product of planned restructuring she recognises the resultant interpretative schemata as emerging from the dialectical synthesis of old with new schemata and actions taken by organizational members in response to changes. This offers an early description of sensemaking's interplay of understanding and action while laying a foundation for the study of sensemaking within organizational change. Exploring further the relationship between schema alterations and action she cites Giddens's (1979) "assertion that structural features are in reciprocal relationship with individual's actions and understanding" (Bartunek 1984 p.336) and concludes that actions and understanding inform the schemata rather than the other way round. This adds a flavour of structuration to the early development of sensemaking.

Isabella's contribution (Isabella 1990) is equally significant in bringing change and individual interpretations together. Using the evidence from interviews with 40 managers she proposes "that interpretations of key events unfold in four stages – anticipation, confirmation, culmination, and aftermath" (p.7). Underpinning her work is the same notion of dynamic interaction between events, interpretation and action: "as change unfolds, different assumptions and orientations are required at different times in the process" (Isabella 1990 p. 8) and so her model is dynamic rather than episodic. Usefully she distinguishes between two types of literature on interpretative work. The first is concerned with "imposing order on past and present actions" leading to "cognitive fundamentals like pattern recognition, attention and recall" (p. 9). Others, including Weick, have "examined the order and structure of specific interpretations through cognitive maps, prototypes and script" (Isabella 1990 p.9). Isabella thus echoes the debate on whether interpretation precedes action or is formed from it placing herself in the second position. Following this she takes four assumptions from the literature to inform her approach that evidently influence later studies on sensemaking:

1. "Organizational members actively create, or enact, the reality they inhabit".
2. Individuals can share collective frames of reference.
3. "The views of managers as a collective are especially salient because managers are at the heart of cognitive shifts that occur during organizational change"

4. Interpretations are made after the event and focus on “elapsed action”.

(Isabella 1990 p. 12)

Brown and Humphries (2003) question the rigid determinism of Isabella’s four part model while recognizing that “it usefully problematize(s) our need to better understand how people collectively make sense of what they construe as radical change (p. 123).

Later studies of middle manager sensemaking (e.g. Balogun & Johnson 2004) are clearly predicated on these assumptions and draw from Isabella’s focus on middle manager cognition during change. Finally she provides an interesting observation on “resistance to change” which further distinguishes her approach from the more formulaic models of organizational change (e.g. Lewin 1951). For Isabella her research indicates that resistances to change could “be ... inherent elements of the cognitive transition during change” rather than “elements to be overcome” or mistrusted. (p.34)

Organizations may be interpretative systems but Weick sees sensemaking as aiding interpretation although not as an interpretative process. For Weick (1995) interpretation assumes the existence of something that can be interpreted whereas sensemaking is concerned with constructing meaning out of unusual or unexpected events. “The act of interpreting implies that something is there ... waiting to be discovered or approximated. Sensemaking, however, is less about discovery than it is about invention.. (rendering) the subjective into something more tangible” (Weick 1995 p.13). It is this tangibility achieved through description that enables subjective construction to be socialised.

Hernes and Maitlis (2010) present this issue curiously as “interpretation vs. meaning creation” (p.30). On one side they place philosophers such as Descartes’ belief that interpretative frameworks connect beliefs with knowledge. They credit Mead (1934) however, among others, with an alternative perspective in which “action is a pre-requisite for meaning creation” (p.30). For Gioia this does not make interpretation and sensemaking oppositional rather it subsumes interpretation within sensemaking, in

other words “interpretation is but a step in the more encompassing process of sensemaking” (Gioia 2006 p. 1718).

2.2.3 Weickian Sensemaking

Centre stage in sensemaking literature is the work of Karl Weick. His development of sensemaking emerges from his work on the social psychology of organizing (Weick 1979) with a firmly social constructionist view of organizations as built around the mental schemata of their members. His interest is in the process of organizing as a way of addressing equivocality: “Organizing is directed initially at any input that is not self-evident. Happenings that represent a change, a difference, or a discontinuity from what has been going on, happenings that seem to have more than one meaning (they are equivocal) are the occasion for sizable collective activity” (Weick 1979 p. 4).

Organizing as a means of addressing equivocation was also evident where organizing is seen as “a consensually validated grammar for reducing equivocality by means of sensible interlocked behaviors” (Weick 1979 p.3). Essentially “‘groups and organizations’ are the result of structuring events/acts and not the other way round” (Czarniawaska 2006 p.1666).

Two further pieces contributed to by Weick stand out as defining works on sensemaking (Weick 1995 and Weick et al 2005). In Weick (1995) seven characteristics of sensemaking were described in order to distinguish it from “other explanatory processes such as understanding, interpretation and attribution” (Weick 1995 p.17).

In the table below is the briefest of summaries of these but they are significant because of the extent to which they are cited in other sensemaking articles¹. All the un-attributed quotes in the table below are from Weick 1995.

¹ Google scholar lists Weick (1995) as providing 9037 citations (August 2011).

Table 1 - Weick's properties of sensemaking (Weick 1995)

Properties of sensemaking	Explanation
Grounded in identity construction	The self as “sense maker”. A conscious self- referential perspective to surface the multiple identities that we bring to the work place. My view of myself and how it is reflected in and by the organization. A dynamic process in which my sense of identity influences, or shifts in response to changes in, the organization and its environment. Self-interpretation - how does who I am help me to make sense of what is happening?
Retrospective	“People can only know what they are doing once they have done it.” (p.24) Weick quotes from Hartshorne (1962) to assert that perception is memory in that it can only derive from experience. We are urged to “step outside the stream of experience” to “direct attention to what exists, that is, what has already passed.” (p.24) This is how retrospective meaning is obtained. But there can be many meanings to events leading to paralysing equivocation and information overload. Clarity, priorities and values can help here.
Enactive of sensible environments	For Weick “enactment” means “people ...producing the environment they face” (p.30). This environment then “constrains their actions”. But, they create what they can interpret hence the word “sensible”. Weick provides the metaphor of nurturing and tending apple trees to illustrate environmental enactment. He also offers legislating as a concrete example of enactment recognising that managers go through the same process to define and contain, and then be constrained by, what they manage.
Social	Sensemaking is inevitably a “social process” in which the presence of others influences the outcome. In describing the “social” Weick quotes from Kahlbaugh (1993): “an individual creates thoughts in the context of interactions with others, and then communicates them to the larger community” (p.39). Rather than relying on individual sensemaking Weick asserts that the implied or actual presence of others enriches the process. The “social” includes shared action in addition to the generation of shared meaning.
Ongoing	Sensemaking is continuous as “people are always in the middle of things”(p.43). The interruption of this flow by an event induces an emotional arousal that triggers sensemaking. The event may also herald an environmental change that warrants attention. Weick speculates that organizational sensemaking is

	more likely to occur from the arousal of negative emotion because interruptions are rarely welcomed. He describes “mood congruency” in which the arousal of an emotion will trigger memories containing the same “emotional tone.”
Focused on and by extracted cues	“Extracted Cues” are simple familiar structures from which people develop a larger sense of what is occurring” and are “crucial for their capacity to evoke action.” Weick quotes Smircich & Morgan (1982) as identifying a critical leadership function here where leaders generate and direct attention to “points of reference” that act as cues. Cues are context dependent and those selected are a product of scanning. He places this involuntary “noticing” of cues ahead of more formal scanning as a prelude to the business of sensemaking. Almost any cue will do if you already have a “cognitive structure” through which to interpret it. As an example he cites the use of a Pyrenean map by Hungarian soldiers lost in the Alps who, believing it to be the right map, found their way back to safety. ² Their sensemaking worked by using the map’s cues and their own images of “where they were and where they were going”. During the journey they noticed further cues that reinforced and sustained the sensemaking.
Driven by plausibility rather than accuracy	“Accuracy is nice, but not necessary”(p.56) – Weick offers Isenberg’s concept of “plausible reasoning” that goes “beyond the directly observable ... to form ideas or understandings that provide enough certainty” (Isenberg 1986). The quest for certainty and the reduction of equivocation is the issue here. In fact Weick derives a proposition from Sutcliffe (1994) suggesting that too much accuracy could inhibit managers from taking “potentially difficult courses of action with the enthusiasm (and) self-confidence necessary (for) success” (Sutcliffe 1994). Knowing enough to be able to get on is the motif here.

These characteristics are built on in Weick et al (2005) in which the location of sensemaking in organization creation is clearly stated: “The operative image of organization is one in which organization emerges through sensemaking, not one in which organization precedes sensemaking or one in which sensemaking is produced by

² Weick attributes this story to Nobel Laureate Albert Szent-Gyorgi

organization” (p. 410). Using Benner’s (1994) account of sensemaking by a nurse Weick et al (2005) build on the sensemaking characteristics identified 10 years earlier:

Table 2 - Further Sensemaking characteristics from Weick et al (2005)

Sensemaking organises flux	Encountering chaos with many competing demands from which sense is made of a “raw flow of activity from which she may, or may not, extract certain cues for attention” (p.411).
Sensemaking starts with noticing and bracketing	This begins with noticing that signs “are at variance with the ‘normal’”. This means bracketing manifestations of the change for closer attention, a process guided by mental models or schemas.
Sensemaking is about Labelling	Labelling stabilizes “the stream of experience”. Quoting Chia (2000) Weick et al assert that labelling is about translating the “intractable or obdurate into a form that is more amenable to functional deployment” (Chia 2000 p.517). These labels “have considerable plasticity” because they are “socially defined” (p.411).
Sensemaking is about presumption Sensemaking is social and systemic	This is concerned with connecting “the abstract with the concrete”. It means starting with a presumption that is tested to draw out and develop an appropriate response. Referring to the nursing context, sensemaking “is influenced by a variety of social factors through contact with other health professionals. “Medical sensemaking is distributed across the system” and “converges “ on patients through “scheduling” and “cross covering” (p. 412)
Sensemaking is about action	The question of “what’s going on here?” is followed by “what do I do next?” with action and talk being “treated as cycles rather than a linear sequence”. Either talk or action can be taken as the “starting point towards the destination” (p.412).
Sensemaking is about organizing through communication	Sharing tacit knowledge by lifting “equivocal knowledge out of the tacit, private, complex and random, and past to make it explicit, public, simpler, ordered and relevant to the situation in hand” (p.413). In this way the organization and its focus for sensemaking and action is being talked into existence. An example is given from Benner (1994) of a nurse absorbing “the complexity of the situation” and describing it in a way that “aligns” different perspectives and roles on the subject of the sensemaking discourse.

2.2.4 The ontological roots of sensemaking

Chia (2002) asserts that the contest between the Greek Heraclitean recognition of constant flux and the Parmenidean process based view of the unchanging nature of reality provides “the key for understanding contemporary debates in the philosophy of science and their implications for management research” (p.5). The former has dominated western thinking culminating in positivistic modernism which he characterises as a “being ontology” where form and order is privileged over chaos. While the latter is a “becoming ontology” and its emphasis on flux and change has informed social constructionism and post modernism. Hernes and Maitlis (2010), in their discussion of sensemaking’s ontological origins, describe this as “things (eluding) the confines of categories because they are on their way to becoming something else” (p.28). Weick et al (2005) pick up this constancy of movement and flux: “sensemaking captures the realities of agency, flow, equivocality, transience, reaccomplishment, unfolding and emergence, realities that are often obscured by the language of variables, nouns, quantities and structures” (p.410). This is a theme that he returns to in a debate with Levinthal & Rerup (2006) on the constancy and quality of attention in organizations (Weick & Roberts 2006).

The theme of flux and becoming is also apparent in sensemaking’s perception of change. Hernes and Maitlis (2010) distinguish it from Lewin’s (1951) “model of ‘unfreeze – change-refreeze’”. They attribute to Tsoukas and Chia (2002) the description of change as a “series of immobilities”. Change is constant rather than episodic and sensemaking therefore rests on awareness of it while capturing the briefly immobile moment of change as a snapshot. Sensemaking is not a technique to be learned but more a phenomenon to be studied.

For Hernes and Maitlis (2010) sensemaking has its foundations in “process thinking” and is a “relative newcomer” (p.27). Langley and Tsoukas (2010) award the title of “best known process approach” to Karl Weick’s (1995) “persistent emphasis on organizing and the important role of sensemaking (within) it” (p.8). For Weick it is

never, for example, about simply making an interpretation but about the process of interpreting which is transforming for the interpreter, the subject of interpretation and the context in which the interpreting occurred. The process of “interpreting” is thus privileged over the mere noun of “interpretation” (Weick 1979). Langley and Tsoukas (2010) provide a distinction between “process” and “substance metaphysics” that helps with the ontological framing of sensemaking. The former sees “processes, rather than substances, as the basic forms of the universe” (p.2). Entities exist but they are unpacked by sensemaking processes “to reveal the complex activities that take place and (which) contribute to their constitution” (p.3). “Becoming, change, flux ... creativity, disruption and indeterminism are the main themes of a process world view” (p.2). Within process metaphysics organization is described as “an emergent outcome of the process of sensemaking through which equivocality is progressively removed” (p.4).

2.2.5 Descriptions of the sensemaking process in organizational change

So far it is possible to say from the literature that sensemaking is a process applied individually or collectively to the experience of change and which enables organizations to enact their environments. In its application it changes the sensemakers and how the organization is perceived and experienced. From a social constructionist and “process organization” perspective (Hernes & Maitlis 2010) it changes the nature of the organization. An endeavour within this review is to gain an understanding of how the sensemaking process operates and is applied during organizational change and particularly strategic organizational change.

Maitlis and Sonenshein (2010) in a pivotal article explore the convergence of the literature’s treatment of sensemaking in crisis with its treatment in organizational change. They note that in both “a change in circumstances interrupts well practiced patterns” (p. 558). This perspective is supported by Weick’s (1993) analysis of sensemaking during the tragic 1949 Mann Gulch forest fire. He demonstrates how a dramatic environmental shift changes the nature of the organization from a fire-fighting unit to an uncoordinated group fighting for survival. Change is therefore likely to alter

permanently the organization, if only by degrees, as “by definition (it) involves a movement in organizational entity over time” (Maitlis & Sonenshein 2010 p. 558). Sensemaking’s relationship with change is therefore both subtle and complex. It is primarily concerned with how change is recognised understood, attended to, interpreted and acted on while acknowledging that change itself emerges from the sensemaking process. This applies whether the sensemaking is explicit and shared or remains tacit and individual. In fact, to take the ontological perspective offered by Langley and Tsoukas (2010), discussed above, the process of sensemaking is indivisible from the process of change for they see change as processural rather than simply material. Weick and Sutcliffe (2006) refer to the “quality of attention” when discussing mindfulness and arguably it is that “quality of attention” that gives strength to sensemaking as a process. Sensemaking therefore not only precedes and follows change but also runs alongside it.

In their analysis of the literature Maitlis and Sonenshein (2010) identify three types of organizational change in which sensemaking has been applied or explored: “strategic”, “identity” and “social” (p.560). All three types, they assert, “emphasize the importance of shared meanings, whether around a key strategy, collective identity or perception of social justice” (p.560). In this review 32 articles have been identified that study organizational, and predominantly strategic, change. Of these most address strategic change, for example merger or restructuring. Everyday strategic planning is investigated in two and changes via the unexpected in a further two. Several articles describe the interdependence of sensegiving and sensemaking. These 32 articles have been drawn on below to provide a description and understanding of sensemaking as a process in the context of change.

Dominating the group are articles that describe the conversational, narrative or discursive aspects of sensemaking conversations. These culminate in the concept of “discursive competence” (Rouleau and Balogun 2011) which suggests a means of enhancing sensemaking. The descriptions below are not of differentiated “types” of sensemaking but rather varying descriptions of the same process.

2.2.5.1 Whose sensemaking?

Maitlis and Sonenshein raise the question of whose sensemaking is being examined (p.559). For example Gioia and Chittipedi (1991) look at senior management, Balogun & Johnson (2004) focus on middle managers while Bartunek et al (2006) consider employees. Rouleau and Balogun (2011) lament the largely “unidirectional” nature of sensemaking analysis (p.955) which they see as dominated by descriptions of management sensemaking. Among the 32 articles in the cohort that report on sensemaking or sensegiving in organizational change eight focus on middle management sensemaking and nine on senior managers or chief executives. Maitlis and Sonenshein (2010) conclude that the research shows that “more generally organizational change gets enacted through middle managers and employees in the frontline to affect both cognitions and actions” (p559).

2.2.5.2 Mental Maps

Balogun and Johnson (2004) suggest that mental maps inform sensemaking. They suggest that managers hold “clusters of thematically related knowledge” (p.525) that they use to make sense of organizational events and experiences. These mental maps are called “schemata”. The concept derives from “Gestalt orientated approaches to person perception that posit people’s tendency to form unified overall impressions out of discrete social elements” (Fiske and Taylor 1991 p.103). An inherent part of schemata production is “bracketing” through which “People do not attend evenly to all aspects of the environment. They watch some things closely and ignore others all together” (Fiske and Taylor 1991 p.125)

Organizational or sub-group schemata have also been identified (Bartunek 1984) although Balogun and Johnson acknowledge the debate over the extent to which schemata create shared meaning or remain as inviolable individual constructs. In referring to the social cognition literature (e.g. Fiske and Taylor 1991) they recognise that “schemata can endure, even when individuals are faced with disconfirmatory evidence” (p.525). During periods of stability shared understanding is likely to be in play “to enable coordinated activity to occur without constant renegotiation of the social order” (Balogun and Johnson 2005 p.525). This suggests that routine and expected

events will maintain schemata while the unusual are likely to re-shape them. Several models for schemata change are identified ranging from the dialectical “conflict model” with each new piece of information “so that change occurs gradually” (Balogun and Johnson 2004, p.525). Their research explored the impact of organizational change on the schemata of middle managers. Balogun finds that activities and events that do not fit with schemata are triggers for sensemaking (Balogun 2006).

2.2.5.3 Informal, inter-subjective and conversational

"Sensemaking is a conversational and narrative process through which people create and maintain an inter-subjective world" (Balogun and Johnson 2004 p.534).

Schemata come into play in the interaction that facilitates sensemaking. In their research on middle management interpretation of strategic change Balogun and Johnson (2005) find that the middle managers’ “old schemata” (p.1586) are shifted in response to the sensemaking triggers associated with the strategic change during Informal inter-subjective processes. Examples of these triggers were “designed change goals and interventions”, “behaviour of other actors” and “design flaws” (p.1587). Social interaction includes “gossip”, “stories”, “sharing experiences”, “negotiations” and “non-verbal signs and signals” (p. 1586). The developing schemata emerging from the process are presented as statements of adaptation or comments on the impact of change e.g.

- “we need to make changes work”
- “we need to develop our own job roles”
- “Contracts make things worse”
- “Blamed for making mistakes” (p.1586)

For Balogun and Johnson (2005) schemata that are consistent with the ambitions of the change instigators will lead to compliance with change outcomes but different schemata could lead to challenges to change. This reinforces Isabella’s (1990) perspective who cautioned that what appears as resistance to change could be a product of “cognitive transition during change” (p.34). Balogun and Johnson (2005) describe a cyclical and iterative process through which sensemaking is partitioned by time periods. “Change

outcomes" developed in one period become inputs for the next period of sensemaking (1589).

Rouleau (2005) also examines middle management sensemaking during strategic change. She argues that "success or failure in strategic change depends on how managers interpret and enact the new orientation during their interactions and conversations" (1414). Routines and conversations emerge as "units of meaning" that were examined by the researcher in an exploration of meaning for the actors and "underlying social rules" (1424).

On the role of stories Apker (2004) recounts care providers' use of stories about their work to make sense of events. Dunford and Jones (2000) cite Araujo and Easton (1996) in asserting that "the primary task of management is ... to construct a discourse of corporate coherence" (1222). This means telling the senior management story during change and lacing it with recurring messages implying, for example, a "sense of threat, the need for alignment of individual perspectives with corporate objectives and the importance of taking personal responsibility for achieving business outcomes." (1222)

2.2.5.4 Sensemaking as discourse

"Discourse" is a hard word to define (Mills 2004) and this is not the place to engage in a debate over its meaning. But Thurlow and Mills (2009) in their discussion of discourse during strategic change used Knights and Morgan (1991 p.254) definition of: "shorthand for a whole set of power/knowledge relations which are written, spoken, communicated and embedded in social practices". Rouleau & Balogun (2011) employ "discourse" and "discursive competence" in the language of sensemaking. Both are concerned with "performing the conversation" (p.953) and "setting the scene" (p.953). This bears similarities with Rouleau's (2005) description of "micro-practices" above. For Rouleau & Balogun (2011) "language use is key, but needs to be combined with an ability to devise a setting in which to perform the language"(p.953). Bean and Hamilton 2006 employed "interpretative discourse" as their method of investigation into the development of a nomadic workforce to gain a specific understanding of sensemaking

via discourse. The concepts behind sensemaking as discourse are reviewed in more detail in Chapter 5 (Conceptual findings).

2.2.5.5 Working with Paradox

Choice and equivocation (Weick 1995) will inevitably form part of organizational actors' experience of change and for this reason sensemaking will unearth paradox. This is because change can bring benefits and loss simultaneously. Some of the literature therefore deals with the surfacing and management of paradox (Lüscher and Lewis 2008, Apker 2004).

In Lüscher and Lewis 2008 the researchers found that ambiguity, uncertainty and confusion fostered during organizational change “spurs reframing” (Lüscher and Lewis 2008 p.222). To enable managers to “surface and cope with their sensemaking challenges” the researchers used a three stage process of firstly identifying “broad concerns of mutual interest” (p.225) with the managers. Secondly, instituting “sparring sessions” through which managers were challenged by the researchers to examine their concerns more deeply. Thirdly, evaluation through which participants assessed “their sparring sessions and subsequent action” (p.225). The sparring sessions surfaced three key paradoxes by moving through a process that began with articulating the problem then pinpointing a dilemma and moving from there to the description the underlying paradox inherent in the problem. The three paradoxes were:

- (1) Paradox of performing – essential then paradox of managing a self-managing team.
- (2) Paradox of belonging – creating engagement and trust in the face of team diversity
- (3) Paradox of organizing – implementing teams in a time of turbulence.

Exploration of these paradoxes in collaborative inquiry between researchers and subjects led to the identification of steps that could lead to a “more workable certainty” (p.231).

In Apker (2004) nurse managers undergoing a transition to a system of managed care were studied. Two conflicting outcomes emerged from the change that created a paradox for the nurse managers. On the one hand it introduced greater collaboration and professional self-esteem, on the other it reduced hospital resources and while increasing “the work and time constraints that negatively affect patient care” (p.221). This “paradox of change” confronted the nurses with the question of “what it ‘means’ to be a nurse in the current health environment” (p.222) creating a conflict for them between the “long held values of nursing” and “cost containment” (p.222). This meant that organizational failure to explore this paradox left the nurses with unresolved “ambiguities” surrounding their professional identity. This is a living example of the first of Weick’s (1995) characteristics of “grounded in identity construction” (p.18).

Vaara (2003) also recognises the role of sensemaking in unpacking ambiguity and paradox: "Sensemaking is seen here as a conceptual framework through which one can understand 'decision making' as contextual processes which are characterized by uncertainty and ambiguity as well as being charged with political tensions" (p. 862)

2.2.6 Summary of sensemaking during organizational change

Hatch and Yannow (2003) cite Weick (1995) to summarise neatly Weick’s interpretative assumptions on sensemaking as “social, inter-subjective, and composed of multiple realities”. They ascribe to him a theory “that organizational sensemaking emerges from continuous processes of renegotiating and reconciling understanding” (p.75). Sensemaking has emerged from the concept of organizations as “interpretative mechanisms” (Daft and Weick 1984) through which they enact their own environments (Weick 1995). It is about making sense by constructing an understanding of something experienced as ambiguous, paradoxical, confounding, unexpected or different. It emerges from an ontology that sees the world in constant flux (Chia 2002) and is largely investigated from the perspective of a social constructionist epistemology.

The sensemaking studies reviewed are dominated by work with middle managers who are seen by the authors as key organizational change agents. Organizational actors come

to sensemaking through mental maps, or schemata that can be re-configured through the sensemaking process often as a way of addressing paradox or equivocation. The view of sensemaking as discourse (Maitlis and Lawrence 2007) and narrative dominates while introducing the concept of discursive competence among managers as a way of facilitating sensemaking.

2.3 Towards Mindfulness

Managers are confronted by a range of anxieties and pressures emerging from their work programme, relationships with colleagues, their personal lives, the operating environment and any number of random events thrown in their path. Being mindful in the face of this onslaught is about responding rather than reacting while using information, attentiveness and clues to make sense of what is happening. Underlying this is the necessity of observing oneself and noting one's responses and reactions to events as they unfold. Ideally mindfulness in the workplace has a social dimension through which meaning and sensemaking is shared to produce a commonly held perception of events. Levinthal & Rerup (2006) describe mindfulness "as a state of active awareness characterized by the continual creation and refinement of categories, an openness to new information, and a willingness to view contexts from multiple perspectives" (p.502). A function of mindfulness therefore is to maintain constant awareness of people and oneself in a ceaselessly shifting environment.

Weick and Puttman (2006) recognise the roots of "mindfulness" in Eastern thought with its emphasis on "paying more attention to internal processes of mind rather than to the contents of the mind" (p. 276). They acknowledge its foundations in Buddhist philosophy which they summarise as "the mental ability to hang on to current objects by bringing wandering (wobbling) attention back to the intended object" (p. 277). In essence it is awareness of the present unhindered by thoughts of the past.

In considering the relationship between mindfulness and sensemaking I would adopt Weick and Sutcliffe's conclusion (2006) that mindfulness is concerned with the "quality of attention". Sensemaking, on the other hand, is the process of how you interpret, use

and act on the knowledge and understanding obtained through mindfulness and attention.

Mindfulness found its way into the management literature through, among others, the work of Langer (1989) and Weick's (and others) work on sensemaking and mindfulness (e.g. Weick and Roberts 1993, Weick et al 1999, Weick & Sutcliffe 2001, Weick & Sutcliffe 2006, Levinthal and Rerup 2006). Ellen Langer (1989) identifies five components of mindfulness:

1. "Creating new categories" – This means going beyond the usual categories that form part of a mental map to interrogate and adjust them by "paying attention to the situation and the context" (p.65). For example the expectation that a particular department might underperform could, if interrogated more closely, reveal much more about different shades and types of performance.
2. "Welcoming new information" – This is concerned with "receptivity" and "openness to new information" (p.66). Langer gives the example of one colleague avoiding caricaturing another as rigid by being open to new information that enables her to see him as principled.
3. "More than one view"- This means being alert to other perspectives and the benefit of exploring them. It avoids an "automatic reaction which reduces choices" (p.71) leaving us open to change and a range of responses.
4. "Control over context" - "The increased control made possible by mindfulness can also help us change contexts" (p.72). Langer gives examples of hospital patients shifting their perception of their current context as a way of gaining more control over their experience of pain.
5. "Process before outcome" – Mindfulness is described as a "process orientation". For Langer this means being mindful and aware of the process that has delivered the outcome and to make the process rather than the outcome the dominant focus of our attention.

A literature search revealed virtually no articles on the role of mindfulness during organizational change but three relevant articles give an indication of how it is framed (Weick and Roberts 1993, Levinthal and Rerup 2006, Weick and Sutcliffe 2006).

The latter two articles form a debate on the relationship between mindfulness, organizational learning and routines. For Levinthal and Rerup (2006) mindfulness sits on top of established routines, in fact, they argue, that established routines are built from mindfulness by using current knowledge for novel situations. In doing this they find that they are “crossing the chasm” between the less mindful behaviour of routines and more mindful cognition. Weick and Sutcliffe (2006) take this further by moving beyond the coding of routines of Levinthal and Rerup and their division of “mindful and “less mindful” to a “contrast between the conceptual and the less conceptual (p. 514) in which the “quality of attention” becomes the critical factor.

In the first article Weick and Roberts (1993) demonstrate the role that “heedful interrelating” plays in complex organization and anticipates Weick and Sutcliffe’s (2001) later work on the phenomenon and functioning of mindfulness in high reliability organizations. The authors describe the interrelating of the various crews and functions on the flight deck of an aircraft carrier. Although this article does not specifically address organizational change it describes an organization experiencing constant flux. In this setting “actors in the system construct their actions (contributions), understanding that the system consists of connected actions by themselves and others (representation) and interrelate their actions within the system (subordination)” (357). Within this heedful behaviour is at play in response to someone else’s actions. For Weick and Roberts “heed” goes beyond mere cognition to acting “critically, consistently, purposefully, attentively, studiously, vigilantly, conscientiously, pertinaciously” (361). “Heedful interrelating” therefore generates a “collective mind” (366) where “the connections that matter are those that link distributed activities”(374). This article describes heedfulness, or mindfulness, as going beyond the formal structure and routines of the organization to create a community of meaning (Hatch and Yannow 2003) centred on critical shared actions. In an afterthought Weick and Roberts recognise

that aspects of interrelating and the “collective mind” could be relevant to newer forms of organization such as networks. (Weick and Roberts 1993 p.376)

Gioia (2006) applauds Weick’s use of the concept “heedful interrelating” as going beyond being merely “careful” while at the same time edging us towards accepting such “an anthropomorphic notion as (collective) mind” (Gioia 2006 p. 1712).

In summary therefore mindfulness refers to the capacity of individuals to respond rather than react by being attentive to what they, and those around them, are experiencing at the time it is happening whereas sensemaking is essentially retrospective. Mindfulness is in the present and contributes to sensemaking through its “quality of attention” to the moment (Weick and Sutcliffe 2006).

2.4 Sensegiving and sensemaking

Sensegiving is concerned with the role played by leaders in generating, articulating and “selling” an interpretation of events as a compass for the sensemaking and action of others (Foldy et al 2008, Gioia & Chittipeddi 1991). Gioia and Chittipeddi (1991) are credited with bringing “sensegiving” and “sensemaking” together for the first time (Rouleau 2005). They describe sensegiving as a process in which “the CEO and top management team first tried to figure out .. then ascribe meaning to strategy-relevant threats, opportunities ... and then ...disseminate a (comprehensible) vision” for “stakeholders and constituents” (p.445). Sensegiving is seen as the dialectical partner of sensemaking in which episodes of sensemaking are regenerated as sensegiving thus leading to further sensemaking and so on (Gioia and Chittipeddi 1991, Maitlis 2005).

Before the term “sensegiving” was fully established in the literature Smircich and Morgan (1982) wrote on the “management of meaning”. This concept incorporates the social construction of leadership and the leader’s role in developing and articulating the shared meaning that comes to define the organization and its actions. The “management of meaning is a necessarily interactive and dialectical process” (Smircich & Morgan

1982) in which individuals “surrender their power to define the nature of their experience” (p.258) in order to gain the benefits of shared meaning and perspective. The absence of leadership can result in “competing definitions of reality” and a feeling of disorganization because the organization’s members “do not share a common way of making sense of their experience” (Smircich & Morgan 1982 p. 258). For Smircich and Morgan the management of meaning works through the “figure-ground” (p.262) relationship in which the leader’s sensemaking offers descriptions of context and people’s role within it. The validity of the “figure ground” relationship created depends on the success of the interaction between leaders and led in moulding a construction of the context that resonates with the led. Leaders’ “key challenge is to manage meaning in such a way that individuals orient themselves to the achievement of desirable ends” (p.262).

Picking up Smircich and Morgan’s (1982) theme of corralling meaning for others Gioia and Chittipeddi (1991) describe the process of sensegiving as: “attempting to influence the sensemaking and meaning construction of others towards a preferred re-definition of organizational reality” (p.442). The processes of sensegiving and sensemaking were found to take place in an “iterative, sequential and to some extent, reciprocal fashion” (p.422) in a sequence described as “envisioning, signalling, re-visioning and energizing” (p.444). The dialectical positioning of sensegiving and sensemaking is seen as a viable way of managing the ambiguity, or equivocation and paradox, that comes with organizational change. Strategic change therefore becomes a process of negotiation where the “resulting change depends on the kind of negotiated reality that the CEO and top management team are able to arrive at with other organizational stakeholders” (446).

Hill and Levenhagen (1995) argue that “metaphors and other mental models” have a role in sensegiving by providing an articulation of the intended change. The mental models they describe can be distinguished from schemata, I would argue, in that they are an outcome of sensemaking for use in sensegiving rather than a framework for sensemaking.

Maitlis (Maitlis 2005) found that the levels of animation and control in sensegiving influence the quality of shared leader and stakeholder sensemaking. “Control” refers to

sensegiving that is “organized and systematic” (p.30) while “animation” means “an intense flow of information” between leaders and stakeholders. The levels of animation and control in sensegiving influence the extent to which sensemaking is guided, fragmented, restricted and minimal” (p.21). Sensegiving and sensemaking are both described as a social process in which leaders and stakeholders dialectically exchange sensegiving and sensemaking (Maitlis 2005).

Hill and Levenhagen (1995) and Gioia and Chittipeddi (1991) describe the benefit of metaphor use for sensegiving during innovation and change. For Hill and Levenhagen (1995) its purpose is to inwardly sell the change through “*alignment* – the task of organizing action towards a single purpose”, and “*attunement*” – preparing individuals to send and receive information” (p. 1069).

During sensegiving emotional and metaphoric re-framings can invoke both “arousal” and “disruption” that if articulated well will have a positive impact on motivation (p.1070). Similarly, Maitlis and Sonenshien see “emotional balancing” as a “key activity for middle managers”. This is achieved by “engaging in sensegiving that manages subordinates’ emotions and creates a sense of continuity and change” (Maitlis and Sonenshein 2010 p.559).

In summary sensegiving is the process of creating a viable understanding and new meaning for other organizational actors to take into their sensemaking. It emerges from the concept of managing meaning (Smircich and Morgan 1982) but is not solely a responsibility of managing or leading because as Maitlis and Lawrence (2007) illustrates it can be taken on by stakeholders. Increasingly the literature recognises it as the necessary processual partner of sensemaking in an exchange between managers and staff. The concept has developed to the extent that managers are no longer seen solely as ‘sense givers’ with staff as ‘sense receivers’. Instead it is more to do with facilitating the development of shared meaning or acknowledging the differences in the sense that is being made of an event and finding a way of managing those differences. At this point it is possible to see how a ‘mindful’ attitude could aid the sensegiving/sensemaking process.

2.5 Conclusion and review question

This chapter has traced the path from the processural ontological roots of sensemaking through Weick's recognition of sensemaking characteristics in the context of organizations as interpretative mechanisms that enact their environments. Building on that is a greater understanding within more recent writing of the discursive and inter-subjective micro practices of sensemaking. The literature is now moving towards a point where leaders, be they middle managers or others, can be active and conscious facilitators of sensemaking and sensegiving through concepts such as "discursive competence" (Rouleau and Balogun 2011) and "heedful interrelating" (Weick and Roberts 1993). Overlooked so far however are questions of power and status which could impact on the capacity to facilitate sensemaking and sensegiving however mindful some might be, but this would need to be the subject of an additional study. The objective here is simply to consider the potential of what has been learned about sensemaking in strategic organizational change for its deployment in investigating how sense is made of organizational performance by organizational actors.

The sensemaking literature demonstrates that sensemaking becomes socialised through the discursive and inter-subjective sharing of mental maps or schemata via sensegiving, narrative, metaphor or similar facilitative processes. In endeavouring to interpret organizational performance organizational actors can be confronted by ambiguity, uncertainty and paradox in much the same way as they are by change. It is likely therefore that those same sensemaking processes are at play even if they have not yet been identified in the literature. Given that it is the inter-subjective and discursive processes that surface and socialise sensemaking during organizational change the assumption being made here is that processes of the same type will surface sensemaking in relation to organizational performance.

Consequently, the review question to take forward is:

What does the literature on sensemaking in organizational change suggest are the key inter-subjective and discursive aspects of sensemaking to be explored in investigating how organizational actors make sense of organizational performance?

‘Sensemaking’ includes ‘sensegiving’ for the purposes of this investigation. ‘Mindfulness’ will be put to one side though because of the absence of relevant literature to investigate in the context of the review question. Both the chapter on Conceptual findings therefore and the Discussion (Chapter 6) will focus on this question.

3 METHODOLOGY

3.1 The Systematic Review Process

The purpose of a systematic review is to provide a study that offers both “rigour and relevance” (Tranfield et al 2003 p.219) through a systematic and unbiased audit, description and analysis of “published and unpublished articles” (p.209) in a closely defined area of interest. The practice of systematic reviews emerged in the UK through the development of evidence based approaches to research in medical science and healthcare during the 1980’s in response to the “comparative lack of rigour in secondary research” (Tranfield et al; 2003 p. 209). Compared to traditional literature reviews, built solely around the focus and bias of the researcher, systematic reviews offer a “replicable, scientific and transparent process” of inquiry and analysis.

This description of the methodology sets out the approach taken in:

1. Planning of the review
2. Systematically searching the literature
3. Evaluating the studies
4. Extracting and analysing data
5. Synthesising the findings

During the review a log was kept to record progress and reflections.

3.2 The Review Panel

The membership of my review panel is set out below. I invited three other people to be part of the panel but regrettably time constraints and other commitments meant that they had to decline. These were:

- Sally Maitlis,- Associate Professor at the Sauder School of Business, University of British Columbia in Organizational Behaviour and Human resources –She has published on organizational sensemaking in strategy and change.
- Julia Balogun – Professor of Strategic Management at Lancaster University Management School. Her interests are strategic management and strategic change. She has published on sensemaking within organizational change and discursive competence.
- David Buchanan –Professor of Organizational Behaviour at Cranfield SOM specialising in change management.

Table 3 - The Review Panel

Person	Organization	Involvement
Pietro Micheli	Cranfield SoM	My supervisor and a Senior Lecturer at the Centre for Business Performance. Pietro has published on public sector performance management
Donna Ladkin	Cranfield SoM	Professor of Leadership and Ethics at Cranfield SOM. She has published on leadership and has considerable knowledge of sensegiving and sensemaking
Emma Parry	Cranfield SoM	Principle Research Fellow at Cranfield SOM and Systematic Review expert
Heather Woodfield	Library Service Cranfield	Information management expertise for literature finding and analysis

The panel members provided the following assistance and support:

Pietro Micheli: As my supervisor I had a series of discussions with Pietro in forming the framework and direction for the systematic review. In particular he helped me to establish the choice of organizational change as a “proxy” for organizational performance management. Pietro played a critical role in enabling me to refine the question on the processural and discursive aspects of sensemaking. He also pointed me to a number of relevant articles.

Donna Ladkin: Donna enabled me to refine my understanding of sensemaking and sensegiving through assignments within the MRes course. She also referred me to several seminal articles related to the management, and leadership, of meaning.

Emma Parry: Emma provided advice and guidance on the format, construction and flow of the systematic review and in particular on linking the literature to the questions. She also provided advice on how to focus the literature search and usefully warned me off searching within the literature of clinical psychology in relation to Mindfulness.

Heather Woodfield: Heather was constantly available for advice and information on which data bases to use and how to construct a search. She was particularly helpful in enabling me to overcome unfamiliarity with the search tools and “Refworks” and advising on the most effective way of gaining remote internet access to searches.

3.3 The Systematic Search

A systematic search was conducted of articles as a means of elucidating answers to the review question. The search was predominantly of journal articles details of which are below. In this section the keywords used are identified and the search process described.

3.3.1 Key words

These are the words used in a variety of combinations during the systematic search. Because it an evolving area of interest a number of words linked to sensemaking were used in order to capture the variety of settings in which sensemaking could be emerging.

These words were arrived at via the initial scoping study, in conversations with my supervisor and through iterations of the systematic review protocol.

Table 4 - Key Words

Concept	Keywords	Rationale
Sensemaking in organizations	Cues Management of Meaning Mindfulness Organization Sensegiving Sensemaking Social (sensemaking)	There are a number of words that denote, or are closely linked, to sensemaking in organizations.
Learning from Sensemaking	Organizational learning	Exploring the relationship between sensemaking and organizational learning in the context of organizational change
Defining Organizational change	Organizational change Change Strategy Strategic change Merger and Acquisition	Defining and categorising the change settings in which sense making has been observed or deployed
Leadership within sensemaking	Leadership Sensegiving Managing Meaning Interpretation	Exploring the role of leaders within organizations in managing meaning at times of change
Recognition within organizational performance management	Organizational Performance Balanced Scorecard	As part of the introduction and the positioning of the field of enquiry given that this is my substantive interest.

3.3.2 Databases selected

The first three databases were searched in detail with Google Scholar used as a final check and to provide a citation count for the articles finally selected.

Table 5 - Databases selected

Search Engine	Rationale
ABI Inform	Comprehensive journal coverage with access to nearly 6000 journals covering businesses, trade and industries across the world. In addition to providing the access to the main body of work on the application of sensemaking to organizations I would also expect to pick some outlying applications.
EBSCO business source complete	Comprehensive with access to more than 2800 scholarly journals covering research in organizations and business. An early (pre protocol search) provided 346 whole text hits on sensemaking and organizational change.
Psych info	The work on sensemaking and mindfulness originates in in psychology and in particular the area of social cognition. It manifests itself quite differently in its emergence in clinical practice from its development in organizational studies. I would expect this database to be the richest source of materials on understanding the relationship between the concepts and their diverse applications. The database provides access to psychological literature with access to 2450 journals of which there is a full record for 1500
Google scholar	Back up and confirmatory trawling and overview but not expected to be comprehensive. It can throw up random connections that might not emerge from other databases.
British Library Catalogue	Theory is a significant aspect of the systematic review. For example gaining an understanding of the relationship between sensemaking, mindfulness and sensegiving. Ann initial search reveals 10-15 titles that could be relevant.

3.3.3 Search strings

The table below shows the search strings used with each of the three main databases and the number of hits achieved for searches of citation and abstract. The key words in each search where only one word has changed appear in bold.

Table 6 - Search Strings

Search string	ABI inform	Psych info	Ebsco
1. Sensemak* OR sensegiv* OR Mindful* AND Organi* title only searched	65	415	702
2. Sensgiv* OR Sensemak* OR Mindful* AND "Organi* change"	52	29	-
3. Sensegiv* OR Sensmak* OR Mindful* AND Leaders*	85	96	51
4. Sensegiv* OR Sensmak* OR Mindful* AND Leadership AND Change	24	18	-
5. Sensegiv* OR Sensmak* OR Mindful* AND Social*	177	60	86
6. Sensegiv* OR Sensmak* OR Mindful* AND "Organi* learning"	2	12	8
7. Cues AND Leaders* AND "Organi* change"	1	0	0
8. Cues AND sensemak*	9	1	8
9. Sensgiv* OR Sensemak* OR Mindful* AND Strateg*	155	309	86
10. "manag* of meaning"	21	8	49
11. Sensgiv* OR Sensemak* OR Mindful* AND Merge* OR Acquisition*	11	40	350
12. Interpret* AND "Organi* change"	375	159	137
13. "organi* perform* AND sensemak*	0	0	0

3.3.4 British Library Search

The British Library database was searched simply using the term “sensemaking” and 48 items were identified.

3.4 Evaluating the Studies

The combined searches using ABI inform, EBSCO, Psych. Info. and the British Library data base produced a total of 3649 items including duplicates. The evidently irrelevant were excluded by title. Abstracts were read for the remainder and evaluated using the criteria described below. From these 156 articles and 4 books from the British Library search were retained.

Table 7 - Criteria for initial selection citation and abstract

Inclusion	Exclusion
<ul style="list-style-type: none">• Sensemaking/Mindfulness/sensegiving theory• Sensemaking/Mindfulness/sensegiving as applied to organizational and strategic change• Social sensemaking• Leadership only in relation sensemaking, sensegiving and mindfulness• Mergers/Acquisitions in relation to sensemaking only• Sensemaking and organizational performance management• Everyday sensemaking• Management of meaning only as it relates to sensegiving• Scholarly and Peer Review Articles in English only• Interpreting organizational or strategic change because it can cover similar ground to sensemaking (e.g. Isabella 1990)• No date limit because research in sensemaking in organizations dates back to the late 1970's at the earliest with the bulk of the literature appearing since 1990.• No regional limits	<ul style="list-style-type: none">• Organizational performance management• General leadership• General organizational change• Sensemaking/Mindfulness in Psychology• Interpreting weak signals

From the reading of abstracts during the initial selection 156 articles and four books were selected for reading. Through reading the full articles and book chapters the choice was narrowed down to 93. The following criteria were applied in making this selection. To be included the items were required to be scholarly and demonstrate at least one of the following:

- A significant theoretical contribution to the understanding of sensemaking, sensegiving or mindfulness during organizational change.
- A description, or study, of the application of sensemaking, sensegiving or mindfulness to organizational change.
- An exploration of sensemaking etc. in non- “high reliability” or in everyday organizational settings.
- Research that covers the engagement of organizational actors in sensemaking etc.
- Tools and micro-practices associated with sensemaking etc. in the context of organizational change.
- The management or leadership of meaning.
- A demonstration of the relationship between sensegiving and sensemaking (and/or mindfulness).
- Sensemaking etc. during organizational performance assessment, interpretation or management.
- A contribution by one of the major conversants (Balogun, Bartunek, Czaniawska, Gioia, Maitlis, Morgan, Rouleau, Smircich, Sonenshein, Sutcliffe, Weick.)

In each case the specific reasons for exclusion were recorded and these are provided in full in Appendix B. The reasons can be summarised as:

- The sensemaking focus was not on organizational or strategic change. Despite this many of these articles covered subjects of interest in the broader application of sensemaking and sensegiving. For example: organizational learning, corporate social responsibility, practice in clinical psychology.
- The sensemaking focus was placed entirely within high reliability settings
- The primary focus was tangential, or peripheral, to the review question e.g. complexity theory, social cognition, post modernism, creativity.
- Book reviews
- Articles in which “sensemaking” was a minor, inactive or absent component e.g. a focus on senior management perception but without reference to sensemaking

The 93 selected items were read and evaluated using the quality assessment devised as part of the systematic review protocol. The Quality assessment reviewed:

1. The contribution made by the article to knowledge and understanding of sensemaking in organizations (or sensemaking and organizational change).
2. The thoroughness of the article’s literature review.
3. The fit between the methodology and the article’s research question as well as the thoroughness of the description.
4. Journal ranking – articles of 2* and above accepted.

Each item was assessed on 0-4 scale and selected articles had to obtain at least 3 in contribution, 2 in literature and methodology, and be rated 2* or above. For theory articles the score was averaged up to allow for the absence of a methodology score. As a result of this assessment 46 articles and four books (50 items) were retained as the final group of items for analysis. The complete list is provided in Appendix A.

Table 8 - Quality Assessment criteria

Factors	0	1	2	3	4
Contribution	No contribution	Minor and insignificant contribution	Some clarity of outcome contribution but not innovative	Clear outcome and a major contribution that addresses a smaller gap	Clear definable outcome and significant contribution to the development of theory/or knowledge and understanding of sensemaking in organizations (or sensemaking and organizational change) by identifying and filling a significant gap
Literature review	Listing the literature only	Minimum review	Adequate review	Good review, placing the research firmly in context	Well placed within the literature so its antecedence in and relevance to previous work is clearly and thoroughly described
Methodology	Unclear and poorly founded	Vague and lacking in detail, some inconsistencies	Adequate description and precedents, mostly consistent	Good description, consistent and strong precedents	Fully described and covers the research question thoroughly. Consistent and clearly and strongly

Factors	0	1	2	3	4
					founded on established research methodology and research methods applied elsewhere in sensemaking.
Cranfield SoM article ranking	unranked	1*	2*	3*	4*

3.5 Extracting data

The list below records the items used to extract the information from the selected materials.

1. Citation

2. Gender of authors

3. Country of origin

4. Research or theoretical question

5. Is the item research or theory?

6. Thematic focus e.g. Sensemaking, Sensegiving, Mindfulness

7. Context/Setting of the article

8. Target population of research

9. Recruitment of subjects

10. Research analysis techniques

11. Key findings

12. Theoretical contribution

13. How to use this article

3.6 Synthesis

The synthesis was aimed at understanding the practices of sensemaking with a particular focus on drawing out key aspects of social sensemaking e.g. narrative, discourse, discursiveness, conversation, leading or managing meaning. Two leading articles were used to key into and identify the elements of the synthesis. These were

Maitlis and Sonenshein 2010 and Rouleau and Balogun (2011). The following elements were used to frame the synthesis of the materials:

1. Conceptual framing of the sensemaking e.g.narrative, discourse
 2. Context
 3. Who is doing the sensemaking?
 4. How does it work?
 5. How is shared meaning constructed?
-

4 DESCRIPTIVE FINDINGS

This section provides a description of the body of 50 materials selected in terms of classification and features. It demonstrates that in the context of sensemaking related topics and organizational change sensemaking dominates while sensegiving is incorporated across more than a third of the materials with few articles on mindfulness. Nevertheless the body of literature suggests a move in direction from the cognitive and managerial to establish the inter-subjective, multi-directional and discursive aspects of sensemaking.

4.1 Materials by major theme

The table (table 1) below sets out how the major themes are reflected in the cohort of materials. The materials are divided into books (4), empirical (32) and theoretical (14) articles. The research articles focus on organizational change and sensemaking or the related topics of sensegiving and the management of meaning. The themes categorised are:

Sensemaking – This is identified when sensemaking is a foundation concept within the material.

Sensegiving/Management of meaning – These two concepts share the process of organizational actors facilitating or contributing to the sensemaking of others although the management of meaning is specifically concerned with the role of managers or leaders in the construction of meaning for others.

Mindfulness – No articles on organizational change with mindfulness as a core concept were found. The closest was Weick and Roberts (1993) with its concept of “heedful interrelating”. The remaining four items identified are concerned with the development of mindfulness as a concept in organizational theory and practice.

Cognitive or schema – These materials focus on the interaction of the experience of change with cognition, mental maps and schemata. This could include the relationship between sensemaking and identity as Weick’s characteristic of “grounded in identity

construction” (Weick 1995) infers that who you become is bound up in your sensemaking.

Narrative or inter-subjective – These materials draw on the conversational, informal, discursive and narrative aspects of sensemaking.

Uni-directional – These materials describe sensemaking as going in one direction, for example, from senior managers to others in the organization.

Multi-directional – These materials describe sensemaking as passing between different groups of organizational actors usually in concert with sensegiving. One observation here is that there is a broad correspondence between explorations on inter-subjectivity and multi-directional sensemaking in the materials.

Table 9 - Materials by Major Theme

	sensemaking	sensegiving or managing meaning	mindfulness	cognitive or schema	narrative or intersubjective	uni-directional	multi-directional
Books							
Hernes, T. (2008)	1	1		1	1		
Hernes, T. and Maitlis, S. (2010)	1	1		1	1		
Langer, E. (1989)			1		1		
Weick, K.E. (1995)	1	1		1	1		
Research Articles							
Apker, J. (2004)	1			1	1	1	
Balogun, J. (2006)	1			1		1	
Balogun, J. and Johnson, G. (2005).	1			1			
Balogun, J. and Johnson, G. (2004)	1			1			
Bartunek, J. M. (1984)				1		1	
Bartunek, J. M., Rousseau, D. M., Rudolph, J. W. and DePalma, J. A. (2006)	1			1		1	
Bean, C. J. and Hamilton, F. E. (2006)	1	1			1		1
Brown, A. D. and Humphreys, M. (2003)	1	1		1	1		1
Dunford, R. and Jones, D. (2000)	1	1		1		1	
Ericson, T. (2001)131.							
Foldy, E. G., Goldman, L. and Ospina, S. (2008)		1		1		1	
Gioia, D. A. and Chittipeddi, K. (1991)	1	1		1		1	
Gioia, D. A. and Thomas, J. B. (1996)	1	1		1		1	
Greenberg, D. N. (1995)	1					1	
Isabella, L.A. (1990)				1		1	
Lüscher, L. and Lewis, M. (2008).	1				1	1	
Maitlis, S. (2005)	1	1			1		1
Maitlis, S. and Lawrence, T. B. (2007)	1	1			1		1
Rouleau, L. (2005)	1	1			1		1
Rouleau, L. and Balogun, J. (2011)	1	1		1	1		1
Stensaker, I., Falkenberg, J. and Grønhaug, K. (2008)	1				1		1
Stensaker, I. and Falkenberg, J. (2007)	1				1		1
Smircich, L & Morgan, G. (1982)	1	1		1			
Thomas, J. B., Clark, S. M. and Gioia, D. A. (1993)	1			1		1	
Thurlow, A. and Mills, J. H. (2009)	1			1	1		1
Tourish, D. and Robson, P. (2006)	1				1		1
Vaara, E. (2003)	1			1		1	
van Vuuren, M., Beelen, P. and de Jong, M. (2010)	1			1	1		1
Weber, P. S. and Manning, M. R. (2001)	1			1			1
Weick, K. E. (1993)	1				1		1
Weick, K. E. and Roberts, K. H. (1993)	1		1		1		1
Werkman, R. (2010)	1				1		1
Theory articles							
Allard-Poesi, F. (2005)	1				16		
Czarniawska, B. (2006)	1						
Daft, R. and Weick, K. (1984)	1	1					
George, J. M. and Jones, G. R. (2001)				1			
Gioia, D. A., Corley, K. G. and Fabbri, T. (2002)	1	1					
Gioia, D. A. (2006)	1						
Harris, S. G. (1994)	1			1	1		
Hill, R. C. and Levenhagen, M. (1995)		1					
Levinthal, D. and Rerup, C. (2006)	1		1				
Maitlis, S. and Sonenshein, S. (2010)	1	1			1		1
Weber, K. and Glynn, M. A. (2006)	1						
Weick, K. E. and Putnam, T. (2006)	1		1		1		
Weick, K. E. and Sutcliffe, K. M. (2006)	1		1		1		
Weick, K. E., Sutcliffe, K. M. and Obstfeld, D. (2005)	1				1		1
	43	18	5	24	41	13	17

4.2 Year of publication

Sensemaking within organizational change is clearly a developing area of interest as 72% of the cohort of materials had been published since 2000 with 44% in the last six years. Also, looking at Table 1 it is clear that the interest in inter-subjective multi directional sensemaking has burgeoned since 2000 as all but 3 of the 15 articles combining these two foci have appeared in the last 11 years.

Table 10 - Article Publication Date

Years of publication	Number of publications from the cohort	%
1982 - 1989	4	8
1990 - 1999	10	20
2000 - 2005	14	28
2006 - 2011	22	44
Total	50	100

4.3 Location of first author

The table below sets out the location of the first author at the time the article was written.

Table 11 - Location of first author

Country	No. of authors	%
Australia	1	2
Canada	5	10
Denmark	2	4
France	1	2
Netherlands	2	4
Norway	3	6
Sweden	2	2
UK	6	12
USA	29	58
Total	50	100

4.4 Gender of first author

In the cohort of 50 materials exactly half the first authors are women and half are men. Looking at the 36 materials produced since 2000 women first authors are 22 (61%) in number and men 14 (39%).

4.5 Journals and ratings

The 46 journal articles were rated as follows using Cranfield (2011) for reference.

- 4* - 29
- 3* - 8
- 2* 9

Below is the list of journals from which the articles were taken showing the number of articles from each:

Table 12 - List of Journals used

Journal	No. of articles
Academy of Management Journal	5
Academy of Management Review	1
Administrative Science Quarterly	4
Human Relations	4
Journal of Applied Behavioral Science	4
Journal of Change Management	3
Journal of Management	1
Journal of Management Inquiry	1
Journal of Management Studies,	5
Journal of Organizational Change Management	4
Journal of Occupational and Organizational Psychology	1
The Leadership Quarterly	1

Journal	No. of articles
Long range planning	1
Organization	1
Organization Science	4
Organization Studies	7
Scandinavian Journal of Management	1
Strategic Management Journal	1

4.6 Citations

Google Scholar was used to obtain the number of citations for each of the articles. The results are in the table below.

Table 13 - Citations

Range of citations	No. of articles in the range
3067 - 1474	3
996 - 615	6
343 - 217	5
177 - 109	6
85-20	18
19 - 0	8
TOTAL	46

The top three cited articles were:
Daft and Weick 1984
Weick and Roberts 1993
Weick 1993

4.7 Summary

The field of sensemaking and sensegiving in relation to organizational change is clearly dominated by scholarship from the USA. It is evident though that developments since 2000 have taken the field more in the inter-subjective direction where discourse, discursiveness and narrative are prominent. Added to this is the establishment of multi-directional sensemaking and sensegiving stretching towards the identification of skills and competencies that facilitate the sensemaking process. Mindfulness has not yet made significant inroads into this area but a handful of writers (e.g. Weick, Sutcliffe, Levinthal and Rerup) are beginning to establish its presence.

5 CONCEPTUAL FINDINGS

5.1 Introduction

The section on ‘Positioning the field of inquiry’ (Chapter 2) above explores the emergence of studies of sensemaking within organizational change and its conceptual and ontological foundations. It rests on a “becoming” ontology (Chia 2002) and a social constructionist epistemology (Maitlis and Sonenshein 2010). Its core conceptual components can be summarised as:

- Organizations are seen as interpretative mechanisms (Daft and Weick 1984, Bartunek 1984, Isabella 1990).
- Sensemaking is retrospective (Weick 1995)
- Organizing serves to address equivocation (Weick 1979, Weick 1995)
- People’s mental maps, or schemata, inform their sensemaking (Balogun and Johnson 2004, Fiske and Taylor 1991, Harris 1995) and enable them to bracket their sensemaking (Ericson 2001).
- Organizations enact their environments through sensemaking (Weick 1995, Orton 2000).
- Sensemaking is necessarily a social process (Weick 1995, Maitlis 2005)
- Sensemaking and sensegiving are frequently combined (Gioia and Chittipeddi 1991, Rouleau and Balogun 2011)

In positioning the field of inquiry there is clearly a preponderance of findings emphasising the inter-subjective and discursive nature of sensemaking during organizational change. This supports Maitlis’s assertion that “organizational sensemaking is a fundamentally social process” through which “organization members interpret their environment” with others and construct “accounts that allow them to comprehend the world and act collectively” (Maitlis 2005 p.21). In her literature review she “highlights the importance of attending to the process through which agreement is achieved” (Maitlis 2005 p.23). This is the point of departure for an examination of the conceptual findings given that the task is to understand how sensemaking concepts in

organizational change can be applied to sensemaking in organizational performance. The concepts being examined here therefore are those that enable definition and examination of inter-subjective and facilitated sensemaking. Broadly this covers the range of processes, or micro practices, that move from informal conversation and narrative through to discourse, sensegiving and the management, or leadership of meaning. Woven through this are notions of power and identity in that it is not simply a matter of illuminating the sensemaking discourse as the management of meaning is intimately bound up in status and control.

5.2 Discourse, discursiveness and leading meaning

“Discourse” in this setting is concerned with a continuing sensemaking conversation among organizational actors. “Discursiveness” relates to the “mode of discourse” (Oxford English Dictionary 2009) and therefore contributes to our understanding of the quality of the sensemaking discourse. Both words are used in the literature to describe focused sensemaking conversations (e.g. Rouleau and Balogun 2011, Thurlow and Mills 2009). On reading the accounts of discursive, interactive and conversational sensemaking it appears as though a whole new medium within organizations is being unearthed. Within this discursive process managers can arguably be seen to be leading on the establishment of meaning (e.g. Rouleau 2005) collaboratively rather than managing meaning towards a specific construction already formed in the minds of managers.

This concept of “discursive competence” appears in Rouleau and Balogun’s re-analysis of material both authors had gathered when investigating sensemaking and sensegiving among middle managers (Rouleau and Balogun 2011). It is defined as “a middle manager's ability to knowledgeably craft and share a message that is meaningful, engaging and compelling within his/her context of operation” (954) “rather than relying on authority” (p.956). They find that discursive competence drives middle managers to move beyond “specific forms of language” to extract the discursive patterns “that govern middle management strategic sensemaking”.(Rouleau and Balogun 2011 p. 975).

“Discursive competence” combines two activities: “performing the conversation” and “setting the scene”. This means being able to say what is required, or what fits, for a particular moment and set of relationships while drawing on contextual “symbolic and verbal representations and the sociocultural system they belong to” (p.954). The descriptions of discursive competence provided in the article demonstrate the middle managers’ capacity to re-frame politically events and expectations in the workplace.

Table 1 – Description of “Discursive Competence” (Rouleau and Balogun 2011 from figure 2. P. 972)

Performing the conversation	Setting the scene
<ul style="list-style-type: none"> Knowing what to say to each stakeholder group (e.g. linking agenda). Using the right words and phrases 	<ul style="list-style-type: none"> Knowing who to target and who to use to influence Bringing the right people together
<ul style="list-style-type: none"> Crafting and diffusing the appropriate message Staging the conversations (e.g. using relevant social rules of engagement/protocols, timing use of expert others in meetings) 	<ul style="list-style-type: none"> Identifying the right media, formats and forums for different stakeholder groups (e.g. appropriate timings and contacts, appropriate packages to use etc.) Setting up the conversations for different stakeholder groups (e.g. appropriate timings and contacts, appropriate packages to use, etc.)
Relating to others (e.g. using first names or not, putting people at ease by asking advice)	<ul style="list-style-type: none"> Building conversations and networks that can be used in the future Building personal image, e.g. as seller or partner or spokesperson.

In their discussion of the literature Rouleau and Balogun trace their path to “discursive competence” and its essentially relational properties (p.956-7). They report that dynamic and cyclical aspects of sensemaking are widely recognised (Gioia and

Chittipeddi 1991). Discursive ability in framing narratives (Maitlis and Lawrance 2007, Apker 2004) to suit audiences and circumstances is also known to contribute to situated sensemaking. Conversational mechanisms and the use of specific language to influence and sell issues (Sonenshien 2006, Maitlis 2005) have also been researched. Laine and Vaara (2007) is cited by Rouleau and Balogun (2011) as demonstrating the “micro conversational mechanisms” for generating shared understanding of change (Rouleau and Balogun 2011 p. 955). The gap for Rouleau and Balogun is found by looking beyond the “cognitive structures,.. routines and systems” (p.956) to understand “how (sensemaking) is constituted and reconstituted in ongoing discursive activities of middle managers” (p.956). This is what led them to the concept of “discursive competence”.

In effect, what is being described by Rouleau and Balogun (2011) is a form of dynamic “sensegiving” in that it demonstrates the capacity to re-frame events and aspects of change in a way that is mindful of, and makes sense to, others. Maitlis and Lawrance (2007) in their research on the triggers of sensegiving broaden the discussion to include stakeholders as organizational actors. They see “discursive ability” as allowing “leaders and stakeholders to construct and articulate persuasive accounts” (p.57). Leaders and stakeholders would also have a role as “process facilitators” who give “organizational actors time and opportunity to engage in sensegiving” (p. 57). For stakeholders sensegiving "was triggered by what they see as important either to themselves, to a stakeholder group whom they represented, or to the organization at large and by an assessment of organizational leaders as incompetent with respect to these issues. Leaders found that sensegiving was triggered by issues they perceived as ambiguous, unpredictable and involving ... diverse stakeholders" (p.76).

Thurlow & Mills 2009 combine enactment and discourse in their discussion. During organizational change “Organizational talk is presented as the enactment of a sensemaking process” (p.459). They argue the need for an exploration of the relationship of language and power during change which could be achieved by examining discourse. They found that different parts of the organization spoke differently about change resulting in "very different sensemaking processes" (476). The authors suggest that "embracing organizational change may not be in the adoption of

change practices but ultimately in the acceptance of language that reflects identity and a change agenda" (p. 476). For Thurlow and Mills (2009) therefore individual identity is constructed or changed via sensemaking and the shifts in language through which you are described and describe yourself. This is an example of what Weick (1995) means by "grounded in identity construction" (p.18) as a characteristic of sensemaking. Apker (2004) provides an example of this in the shift in role and identity of nurse managers during a transition to a system of managed care. Gioia et al (2002) add that recognition of organizational history during change is important for addressing self-identity in that change proposals should be "somehow connected to "who we have been"" (p.632). They conclude that "if identity is not somehow affected, it is unlikely that any substantive change can occur" (p.633).

Bean and Hamilton 2006 employed "interpretative discourse" as their method of investigation into the development of a nomadic workforce to gain a specific understanding of sensemaking via discourse. They identified three elements (p.334) in leaders' discourse for the framing of change:

- (1) Labels e.g. "flexibility", "freedom"
- (2) Conceptual anchors e.g. "self-management expressed as autonomy"
- (3) Enacted themes e.g. Using a "project-based structure (as) a metaphor that fosters and incorporates the labels and anchors" (p.334)

Leaders were focused on obtaining an emotional acceptance of the change. Some employees adopted the leaders' framing while others saw it as detrimental. Workers who rejected or questioned the leaders' sensemaking formed their own "discursive templates" in discussion with other nomadic workers and emerged with a "more critical view" (p. 341). The dimensions of the change experienced can thus vary according to the position occupied in the organization. Maitlis & Sonenshein (2010) cite Bartunek et al (2006) in saying: "What might be a strategic change to top managers can be a change that has strong ethical, social, or emotional overtones for employees" (p.560).

Rouleau (2005) identifies four micro practices adopted by middle managers that appear in each "routine and conversation surrounding the change" (p.1432). These practices

are the ways in which middle managers were found to manage and guide meaning within the sensemaking discourse. They are:

Translating the New Orientation - telling people stories they want to hear about the change,

Overcoding the Strategy – using tacit knowledge of the socio cultural and professional background of the interlocutor to code what is being said. This study was among French and English speaking Canadians so awareness of cultural background, for example, coded the conversation.

Disciplining the client – Rouleau adopts Foucault's (1977) suggestion that "discipline comes from a meticulous organization of gestures, words and objects" for "optimal use of space, bodies and thought" (p. 1428). Middle managers thus "discipline" their communication with clients "to sell the new strategic orientation" (p. 1428).

Justifying the change - "providing a set of good reasons to adopt the product" (p.1432). This also shows "how managers draw on their tacit knowledge to make sense of change and share it with others" (1437)

Stensaker and Falkenberg (2007) identify five ways in which organizational members interpret the sensemaking discourse and which in turn influence their actions:

Convergent - people generate accounts "that are in line with corporate intentions"

Divergent - individual accounts do not conform to corporate intentions

Unresolved sensemaking - "continuous and unsuccessful attempts at understanding new ideas, this includes "an inability to make sense of new constructs" relevant to the business context

Creative response - abstract ideas are further developed to fit the organizational context

Non-compliance - an understanding of corporate intentions but no subsequent action - a belief that management had "hidden intentions"

(Stensaker and Falkenberg pp.167-168)

Maitlis (2005) acknowledges the value of studying the leaders' sensegiving role while critiquing it for largely ignoring "the interaction of different actors' sensemaking behaviors and how this interaction affects sensemaking processes" (p. 22). She derives a four part organizational sensemaking typology from her research into sensemaking in orchestras. The domains for sensemaking in her research are concerned with everyday issues rather than exceptions e.g. cost cutting, income generation and collaborative ventures (p. 40). Her typology combines the two elements of "animation" and "control". The former describes the liveliness and intensity of the information flow to stakeholders while "control" covers the extent of leader sensegiving involved. "Guided Organizational Sensemaking" for example is high on both animation and control while at the other end of the typology "Minimal Organizational Sensemaking" is low on both. In between are "Restricted Organizational Sensemaking" (low animation, high control) and "Fragmented organizational Sensemaking" (high animation, low control) (p.32). Maitlis is careful to conclude that there is no one optimum combination and that the typology simply describes a range of sensemaking activities under varying circumstances.

These accounts of sensemaking discourse bring to life Weick's earlier quote of "How do I know what I think until I can see what I say" (Weick 1995, p.5). The act of articulating the experience of change discursively defines the acts, thoughts and knowledge that give life to a different way of seeing oneself and circumstances. It is literally the mobilisation of words for action.

5.3 Summary and conclusion

The sensemaking discourse combines both sensegiving and sensemaking dialectically while managers, especially middle managers, can play a critical role in discursively leading the shaping and negotiation of the meaning and action to emerge from the process. Equally it provides highly nuanced understanding of the process of enactment. For Rouleau (2005) the conceptual development of discursive sensemaking has arisen from a splitting in the literature in the way in which sensemaking and sensegiving is perceived. "On the one hand" as Rouleau sees it, the focus has been on "how managers make sense of (strategic) change despite a high level of ambiguity and uncertainty", and

she cites Hill and Levenhagen (1995) as an example. “On the other hand”, she continues, since the “end of the 1990’s many works on strategic sensemaking have taken a narrative turn” and she cites Dunford and Jones (2000) as an example (Rouleau 2005 p.1415). She adds that “By capturing the richness of the symbolic elements of strategic change, these scholars provide a more contextual and active view than the one offered by cognitive approaches, which are generally limited to the managerial mind-set” (Rouleau 2005, p.1415). Sensemaking and sensegiving have therefore traced a path that began with the cognitive approach of Gioia and Chittipedi (1991) through to the highly inter-subjective “discursive competence of Roulaeu and Balogun (2011).

Add to this overall dynamic these few articles provide a rich variety of concepts that colour and vivify the sensemaking discourse. Included here would be Maitlis’s (2005) identification of the animation/control dynamic or the micro practices identified by Rouleau(2005) on the one hand for middle managers and by Stensaker and Falkenberg(2007) for interpretations of sensegiving by staff. The richness of this literature with its focus on symbolism, narrative and discourse appears to offer considerable potential in exploring sensemaking within organizational performance.

6 DISCUSSION

This dissertation charts the path through the development of sensemaking and sensegiving to arrive at the point where the discursive, interactive and narrative practices are featuring strongly in the literature. It remains to be seen however how these practices would facilitate an organization's discourse on its performance. Clearly sensemaking has been explored in relation to strategy delivery (e.g. Balogun and Johnson 2005). Strategic management and organizational performance have been fused through the development and use of systems of measurement for organizational performance such as the balanced scorecard (Kaplan and Norton 1996). Adding sensemaking and sensegiving to the process of understanding strategic performance could appear as a logical development.

The review question established at the outset was: 'What does the literature on sensemaking in organizational change suggest are the key inter-subjective and discursive aspects of sensemaking to be explored in investigating how organizational actors make sense of organizational performance?' I would like to address it in two ways. Firstly by making the case for applying the concept of sensemaking to organizational performance management and, secondly, by speculating on the sensemaking practices that could be investigated to understand how sense is made by organizational actors of organizational performance.

It is possible now, given the developments in inter-subjective sensemaking described, to speak in terms of the "sensemaking discourse". I would take this to include the combined dialectic of sensemaking and sensegiving. Consequently, in referring to "sensemaking" in this discussion I am including "sensegiving". Mindfulness, on the other hand is not being referred to. From the literature reviewed so far one can speculate that it plays a part but it has not been sufficiently investigated for me to be able to make any claims at this stage about the part that it plays.

6.1 Organizational Performance and Sensemaking

Currently, it is argued, that sense is made by managers of organizational performance also through the process of performance measurement. Performance measurement has evolved from being an arm of financial accounting to a sophisticated system of balanced financial and non-financial measures designed to support the management of controls, decision making and strategic management (Kaplan & Norton 1996, Simons 1995). Yet there is no established convention for what constitutes a performance measurement system (PMS) (Franco Santos et al 2007). Neither is there any clear understanding of the process by which information on organizational performance combines with managers' constructs, beliefs and mental maps (Fiske and Taylor 1991) to produce knowledge, plans, improvements or any other outcome. Equally, the extent to which managers rely on performance data for understanding the performance of their organization is also unknown.

Neely (1995) illustrates the problem by describing an instance of managers' disregard of performance data. He quotes a KPMG report (KPMG 1990) which states that "increasing numbers of executive directors ...express concern that the information they receive neither enables them to measure performance against their chosen strategy ... nor helps them in their strategic-decision making process. The common complaints are of too much data and too little analysis."(p.102). Performance Measurement can therefore take organizations to a vantage point from which they can survey a wealth of information on organizational activity but the effect, meaning and benefits of this are uncertain. Pavlov and Bourne (2011) recognise this problem in the "contradictory evidence" from current studies. They characterise the contradiction as "on one hand (showing) that measurement is a powerful tool for affecting organizations (and) their performance (but that) the nature and direction of this effect is far from predictable" (Pavlov and Bourne 2011 p.102). Marr (2006) has a particular concern over the utility of measures: "I have been talking to many senior executives of both corporations and not-for-profit organizations, over the past years, and everyone shares the same frustration that the existing measures are of little value. Even though record numbers of

performance measures are being collected ... few valuable insights are produced.”
(Marr 2006 p. xv Preface)

Henri in discussing the relationship between organizational culture and performance measurement (Henri 2006 p.81) identifies from the literature four functions for performance measurement: Monitoring, Attention focusing, Strategic decision Making and Legitimization. Of particular interest is “Attention Focusing” as it asks the question of “What problems should we look into?” (Simon et al 1954 cited in Henri 2006). This is closest to a sensemaking perspective and hints at “managing meaning” (Morgan and Smircich 1982) when Henri describes senior managers as sending “cues” into the organization on what to explore.

From the perspective of third sector organizations, my particular area of interest, the problem is, if anything even more severe. Moxham (2010) finds that third sector performance measurement rests almost exclusively on analysis of the use of funds and outputs. Yet, the consuming interest, she finds, of those working in third sector organizations is likely to be the impact of their work on individual beneficiaries. The challenge for third sector therefore is finding an approach to the discourse on organizational performance that accommodates a range of stakeholder interests. None of this is to suggest that performance measures do not have immense utility in proving data on key organizational processes, activities and the operating environment. The question is more one of how to obtain, interpret and work with a coherent picture of organizational performance.

Among Karl Weick’s seven properties of sensemaking is “driven by plausibility rather than accuracy” (Weick 1995 p.55) where he suggests that too much accuracy, or perhaps equivocal data, could prevent managers from taking difficult but necessary courses of action. It is also evident from the varying accounts above of the use of performance measures that managers, and other organizational stakeholders, by implication rely on a variety of tacit or explicit factors in coming to a view on organizational performance. In other words they are already “making sense” of a range of tacit and explicit data, information and background noises relevant to organizational performance. Equally, it is possible to speculate that the sensemaking processes

operating in making sense of organizational change are being equally applied to making sense of organizational performance. There is therefore a case for saying that sensemaking operates in relation to organizational performance but it has not yet been charted. The more difficult and challenging question is what the impact would be of introducing a sensemaking discourse to organizational performance management and that question remains to be answered.

6.2 Investigating sensemaking in organizational performance

There is a fundamental paradox in applying the sensemaking discourse to organizational performance which has been present from the outset. Clearly people will make sense of organizational performance but it does not follow from this that “sensemaking” is taking place. Going back to the definitions considered earlier sensemaking operates at the point of uncertainty, change or disjuncture or where the expected has been interrupted. Several writers (Apker 2004, Thurlow and Mills 2009, Van Vuuren et al 2010) consider the role that sensemaking plays in identity finding and reconstruction during the process of change and Weick makes identity construction the first property of sensemaking (Weick 1995). Considering the issues of disjuncture and identity, both of which are central to sensemaking, the question is raised as to whether organizational performance goes to the core of people’s experience and identity in the same way that organizational change can.

However, when the nurses in Apker (2004) re-considered their identity as a way of addressing paradox produced by strategic change they did so because what their organization did was fundamental to how they saw themselves. A question to take into research on sensemaking and organizational performance therefore is the relationship between identity and how and what the organization performs. On the question of disjuncture it could relate to sensitivity to changes in, and interruptions of performance, that might be picked up retrospectively by performance data but which could be more readily evident to mindful staff.

By examining these two aspects of the sensemaking topography it is possible to divine circumstances in which the sensemaking discourse could be active in organizational

performance in a way that goes beyond the simpler notion of “making sense of performance”. The first questions are necessarily “what is being made sense of?”, “who is doing it?” and “what type of inter-subjective processes are being applied in doing so?” These could be followed by an exploration of how this feeds into organizational performance management, not in a direct and obvious way but, for example, via conversation or routine. In the same way that Rouleau and Balogun (2010) revealed a whole layer of discourse around change that brought a richness of understanding to the organization a similar discourse on organizational performance could be equally revealing and beneficial. To this Maitlis and Sonenshein (2011) would add “updating and doubting” as they see the exercise of doubt as “energizing ... greater possibilities” (p. 565).

Over the coming weeks and months I shall take the opportunity to develop these thoughts but for the meantime the progress over the last decade towards inter-subjective sensemaking noted by Maitlis (2005) offers the prospect of exploring a number of ways into understanding the sensemaking discourse within organizational performance. Of particular interest here are mental maps, informal dialogue, then place of identity, stories and narrative and routines and conversations.

Finally, reflecting on leadership and sensemaking/sensegiving, the development of “discursive competence” (Rouleau and Balogun 2010) opens up the prospect of making leading on the construction of shared meaning a more conscious management role. This was recognised much earlier by Gioia and Chittipedi (1991) who write: “The imagery conveyed by metaphors like “sensemaker” and sensegiver” broadens the conception of top management activities ... (They) also complement or subsume other related descriptive metaphors such as ‘visionary’, ‘teacher’, or ‘symphony conductor’” (Gioia and Chittipedi 1991 p. 446). To this Maitlis and Sonenshein (2011) add the power of commitment to “re-shaping or organizational reinventing in the light of the change underway” (p.562)

7 CONCLUSION

This dissertation began with the question of what could be learned from the application of sensemaking in strategic organizational change in order to investigate how sense is made by organizational actors of organizational performance. Literature on sensemaking and sensegiving during organizational change was systematically reviewed in order to answer the question.

The literature demonstrates evidence of a fusion of sensemaking and sensegiving within a discourse that has the potential of enabling managers, especially middle managers, to lead and facilitate meaning during significant change. This discursive and inter-subjective model of sensemaking has come to dominate the organizational change sensemaking literature since 2000 in a partial displacement of an essentially cognitive approach.

Recognising that there is still a question over the suitability of investigating sensemaking in the context of organisational performance management there appears to be sufficient similarity to warrant further exploration. The discursive practices described would lend themselves both to the management of meaning in relation to organizational performance as well as to enabling a discourse on performance management among managers and stakeholders. Untouched so far though are two major factors that could influence the operation of sensemaking in organizational performance management namely power and emotion. These are best left for another day.

REFERENCES

- Allard-Poesi, F. (2005), "The Paradox of Sensemaking in Organizational Analysis", *Organization*, vol. 12, no. 2, pp. 169.
- Apker, J. (2004), "Sensemaking of change in the managed care era: A case of hospital-based nurses", *Journal of Organizational Change Management*, vol. 17, no. 2, pp. 211.
- Balogun, J. (2006), "Managing Changes: Steering a Course between Intended Strategies and Unanticipated Outcomes", *Long range planning*, vol. 39, no. 1, pp. 29.
- Balogun, J. and Johnson, G. (2004), "Organizational Restructuring and Middle Manager Sensemaking", *Academy of Management Journal*, vol. 47, no. 4, pp. 523.
- Balogun, J. and Johnson, G. (2005), "From Intended Strategies to Unintended Outcomes: The Impact of Change Recipient Sensemaking", *Organization Studies*, vol. 26, no. 11, pp. 1573.
- Bartunek, J. M. (1984), "Changing Interpretive Schemes and Organizational Restructuring: The Example of a Religious Order", *Administrative Science Quarterly*, vol. 29, no. 3, pp. 355.
- Bartunek, J. M., Rousseau, D. M., Rudolph, J. W. and DePalma, J. A. (2006), "On the Receiving End: Sensemaking, Emotion, and Assessments of an Organizational Change Initiated by Others", *The Journal of applied behavioral science*, vol. 42, no. 2, pp. 182-206.
- Bean, C. J. and Hamilton, F. E. (2006), "Leader framing and follower sensemaking: Response to downsizing in the brave new workplace", *Human Relations*, vol. 59, no. 3, pp. 321.
- Basu K. and Palazzo G. (2008), "Corporate Social Responsibility: A process model of Sensemaking", *Academy of Management Review*, Vol. 33. No. 1, pp. 122-136.
- Beck, T., Plowman, D., (2009), "Experiencing Rare and Unusual Events Richly: The Role of Middle managers in Animating and Guiding Organizational Interpretation", *Organization Science*, Vol. 20, No. 5, pp. 909-925
- Benner, P. (1994), "The role of articulation in understanding practices and experience as sources of knowledge in clinical nursing" in Tully, J. (ed) *Philosophy in Age of Pluralism: The Philosophy of Charles Taylor in Question*, Cambridge University Press, New York, pp. 136-155, cited in Weick et al (2005).
- Brown, A. D. and Humphreys, M. (2003), "Epic and tragic tales: Making sense of change", *The Journal of applied behavioral science*, vol. 39, no. 2, pp. 121.

- Chia, R. (2000), "Discourse analysis as organizational analysis", *Organization*, Vol. 7, No. 3 pp. 513-518.
- Chia, R. (2002), "The Production of Management knowledge: Philosophical Underpinnings of Research Design", in Partington, D. (Ed), *Essential Skills for Management Research*, Sage, London.
- Cranfield, (2011) "*Journal Recommendations for Academic Publication*", 8th edition, Cranfield School of Management.
- Czarniawska, B. (2006), "A Golden Braid: Allport, Goffman, Weick", *Organization Studies* (01708406), vol. 27, no. 11, pp. 1661-1674.
- Daft, R. and Weick, K. (1984), "Towards a Model of organizations as Interpretation Systems", *Academy of Management Review*, Vol. 9, No. 2, pp. 284-291.
- Dunford, R. and Jones, D. (2000), "Narrative in strategic change", *Human Relations*, vol. 53, no. 9, pp. 1207.
- Ericson, T. (2001), "Sensemaking in organizations—towards a conceptual framework for understanding strategic change", *Scandinavian Journal of Management*, vol. 17, no. 1, pp. 109-131.
- Fiske, S. and Taylor, S. 2nd edition (1994), "*Social Cognition*", McGraw-Hill, USA.
- Folgy, E. G., Goldman, L. and Ospina, S. (2008), "Sensegiving and the role of cognitive shifts in the work of leadership", *The Leadership Quarterly*, vol. 19, no. 5, pp. 514-529.
- Foucault, M. (1977), *Discipline and Punish*, Penguin, Harmondsworth. Cited in Rouleau, L. (2005).
- Franco-Santos, M., Kennerley, M., Micheli, P., Martinez, V., Mason, S., Marr, B., Gray, D. and Neely, A., (2007), "Towards a definition of a business performance measurement system", *International Journal of Operations and Production Management*, Vol. 27, No. 8, pp. 784-801.
- Gephart, R. (1993), "The textual approach: Risk and Blame in Disaster sensemaking", *Academy of Management Journal*, Vol. 36, pp. 1465-1515.
- Giddens, A. (1979), "*Central Problems in Social Theory*", CA, University of California Press, cited in Bartunek, J. (1984)
- George, J. M. and Jones, G. R. (2001), "Towards a process model of individual change in organizations", *Human Relations*, vol. 54, no. 4, pp. 419.
- Gioia, D. A. (2006), "On Weick: An Appreciation", *Organization Studies* (01708406), vol. 27, no. 11, pp. 1709-1721.

- Gioia, D. A. and Chittipeddi, K. (1991), "Sensemaking and Sensegiving in Strategic Change Initiation", *Strategic Management Journal*, vol. 12, no. 6, pp. 433.
- Gioia, D. A. and Thomas, J. B. (1996), "Identity, image, and issue interpretation: Sensemaking during strategic change in academia", *Administrative Science Quarterly*, vol. 41, no. 3, pp. 370.
- Gioia, D. A., Corley, K. G. and Fabbri, T. (2002), "Revising the past (while thinking in the future perfect tense)", *Journal of Organizational Change Management*, vol. 15, no. 6, pp. 622-634.
- Greenberg, D. N. (1995), "Blue versus gray: A metaphor constraining sensemaking around a restructuring", *Group & Organization Management*. Special Issue: Organizational Studies Conference: Best papers, vol. 20, no. 2, pp. 183-209.
- Harris, S. G. (1994), "Organizational culture and individual sensemaking: A schema-based perspective", *Organization Science*, vol. 5, no. 3, pp. 309.
- Hartshorne, C. (1962), "Mind as Memory and creative love." In Scher, J. (Ed) *Theories of the Mind*, Free Press, New York, pp. 440- 463. cited in Weick (1995)
- Hatch, M. & Yannow (2003), "Organization Theory as Interpretative Science", in Tsoukas, H. & Knudsen, C. (eds), *The Oxford Handbook of Organization Theory*, Oxford University Press, Oxford.
- Henri, J.F. (2006) "Management Control Systems and Strategy – A resource based perspective", *Accounting, Organizations and Society*, Vol. 31, pp 529-555
- Hernes, T. (2008), "Karl Weick on organizing and sensemaking" in Hermes, T. *Understanding Organizations as Process- Theory for Tangled World*, pp. 114-127, Routledge, USA.
- Hernes, T. and Maitlis, S. (2010), "Process, Sensemaking, and Organizing: An Introduction", in Hernes, T. and Maitlis, S. (editors) "Process, Sensemaking And Organizing", Oxford University Press.
- Hill, R. C. and Levenhagen, M. (1995), "Metaphors and Mental Models: Sensemaking and Sensegiving in Innovative and Entrepreneurial Activities", *Journal of Management*, vol. 21, no. 6, pp. 1057.
- Isabella, L.A. "Evolving Interpretations As A Change Unfolds: How Managers", (1990), *Academy of Management Journal*, vol. 33, no. 1, pp. 7.
- Isenberg, D. (1986), "Thinking and Managing: A verbal protocol analysis of managerial problem solving", *The Academy of Management Journal*, vol. 29, Np. 4, pp. 775-778, cited in Weick (1995)

- Kahlbaugh, J., (1993), "James Mark Baldwin: A bridge between social and cognitive theories of development". *Journal for theory of social behaviour*, 23 pp. 79-103, cited in Weick (1995)
- Kaplan, R. and Norton, D. (1996), *The Balanced Scorecard - Translating Strategy into Action*, Harvard Business School Press, Boston, Massachusetts.
- Knight, D. and Morgan, G. (1991), "Corporate strategy, organizations, and subjectivity; a critique", *Organization Studies*, Vol. 12, No.2, pp.251-273, cited in Thurlow & Mills (2009).
- KPMG, (1990), *Information for Strategic Management – A survey of Leading Companies*, KPMG Management Consulting (cited in Neely 1995).
- Laine, P. and Vaara, E. (2007), "Struggling over subjectivity: a discourse analysis of strategic development in an engineering group", *Human Relations*, Vol. 59, pp. 611-636. Cited in Rouleau and Balogun 2011.
- Langer, E. (1989), "Mindfulness", Addison-Wesley, USA.
- Langley, A. and Tsoukas, H. (2010), "Introducing Perspectives on Process Organization Studies", in Hernes, T. and Maitlis, S. (editors), *Process, Sensemaking, & Organizing*, Oxford University Press.
- Levin, K. (1951), *Field Theory in Social Science*, New York, Harper and Row, cited in Hernes and Maitlis (2010).
- Levinthal, D. and Rerup, C. (2006), "Crossing an Apparent Chasm: Bridging Mindful and Less-Mindful Perspectives on Organizational Learning", *Organization Science*, vol. 17, no. 4, pp. 502.
- Lucretius, T.C., *On the Nature of Things*, New York, Dover, cited in Hernes and Maitlis (2010).
- Lüscher, L. and Lewis, M. (2008), "Organizational Change and Managerial Sensemaking: Working through Paradox", *Academy of Management Journal*, vol. 51, no. 2, pp. 221.
- Maitlis, S. (2005), "The Social Processes of Organizational Sensemaking", *Academy of Management Journal*, vol. 48, no. 1, pp. 21.
- Maitlis, S. and Lawrence, T. B. (2007), "Triggers and Enablers of Sensegiving in Organizations", *Academy of Management Journal*, vol. 50, no. 1, pp. 57.
- Maitlis, S. and Sonenshein, S. (2010), "Sensemaking in Crisis and Change: Inspiration and Insights From Weick (1988)", *Journal of Management Studies*, vol. 47, no. 3, pp. 551-580.

- Marr, B. (2006), *Strategic Performance Management – Leveraging and managing your intangible drivers*, Butterworth-Heinemann, Oxford.
- Mead, G. H., (1934), *Mind, Self and Society*, Chicago, University of Chicago Press, cited in Hernes and Maitlis (2010).
- Mills, S. (2004), *Discourse*, (2nd edition), Routledge, London.
- Mohr, L.B. (1982), *Explaining Organizational Behavior*, Jossey-Bass, San Francisco, cited in Langley and Tsoukas (2010)
- Moxham, C. (2010), “Help or Hindrance? – Examining the role of Performance Measurement in UK Non-Profit Organizations”, *Public Performance and Management Review*, Vol. 33, No. 3, pp. 342-354.
- Neely, A., Gregory, M. and Platts, K., (1995), "Performance measurement and system design", *International Journal of Operations and Production Management*, Vol. 15, No. 4, pp. 80-116.
- Orton, J., (2000), “Enactment, Sensemaking and Decision Making: Redesign Processes in the 1976 reorganization of US intelligence.” *Journal of Management Studies*, Vol. 18, No. 2, p. 213-234.
- Pavlov, A. and Bourne, M., (2011) "Explaining the effects of performance measurement on performance - An organizational routines perspective," *International Journal of Operations and Production Management*, Vol. 31, No. 1, pp 101-122.
- Rerup. C. (2009), "Additional Triangulation – Learning from Unexpected Rare Crises", *Organization Science* Vol. 20, No. 5 pp. 876-893
- Rouleau, L. (2005), "Micro-Practices of Strategic Sensemaking and Sensegiving: How Middle Managers Interpret and Sell Change Every Day", *The Journal of Management Studies*, vol. 42, no. 7, pp. 1413.
- Rouleau, L. and Balogun, J. (2011), "Middle Managers, Strategic Sensemaking, and Discursive Competence", *Journal of Management Studies*, vol. 48, no. 5, pp. 953-983.
- Simon, H.A., Guetzkow, H., Kozmetsky, G. and Tyndall, G. (1954) “Centralization vs decentralization in organizing the controllers’ department.” New York: Controllership Foundation Inc. (cited in Henri 2006)
- Simons, R., (1995) “Control in an age of Empowerment”, *Harvard Business Review*, March-April 1995.
- Smircich, L & Morgan, G. (1982), "Leadership: The Management of Meaning", *The Journal of Applied Behavioral Science*, Vol.18, No. 3, pp 257-273

- Sonenshein, S. (2006), "Crafting social issues at work", *Academy of Management Journal*, Vol. 49, pp. 1158-72. Cited in Rouleau & Balogun (2011).
- Sutcliffe, K. (1994), "What executives notice: Accurate perceptions in top management teams". *Academy of Management Journal*, 37, p. 1360-1378, cited in Weick (1995).
- Stensaker, I. and Falkenberg, J. (2007), "Making sense of different responses to corporate change", *Human Relations*, vol. 60, no. 1, pp. 137.
- Stensaker, I., Falkenberg, J. and Grønhaug, K. (2008), "Implementation Activities and Organizational Sensemaking", *The Journal of applied behavioral science*, vol. 44, no. 2, pp. 162.
- Thomas, J. B., Clark, S. M. and Gioia, D. A. (1993), "Strategic sensemaking and organizational performance: Linkages among scanning, interpretation, action, and outcomes", *Academy of Management Journal*, vol. 36, no. 2, pp. 239.
- Thurlow, A. and Mills, J. H. (2009), "Change, talk and sensemaking", *Journal of Organizational Change Management*, vol. 22, no. 5, pp. 459-479.
- Tsoukas, H. & Chia, R. (2002), "On Organizational Becoming: Re-thinking organizational change", *Organization Science*, vol. 13, no. 5, pp. 567-82. Cited in Hernes and Maitlis (2010).
- Tourish, D. and Robson, P. (2006), "Sensemaking and the Distortions of Critical Upward Communication in Organizations", *The Journal of Management Studies*, vol. 43, no. 4, pp. 711.
- Vaara, E. (2003), "Post-acquisition integration as sensemaking: Glimpses of ambiguity, confusion, hypocrisy, and politicization", *The Journal of Management Studies*, vol. 40, no. 4, pp. 859.
- van Vuuren, M., Beelen, P. and de Jong, M. (2010), "Speaking of dominance, status differences, and identification: Making sense of a merger", *Journal of Occupational and Organizational Psychology*, vol. 83, no. 3, pp. 627.
- Weber, K. and Glynn, M. A. (2006), "Making Sense with Institutions: Context, Thought and Action in Karl Weick's Theory", *Organization Studies* (01708406), vol. 27, no. 11, pp. 1639-1660.
- Weber, P. S. and Manning, M. R. (2001), "Cause maps, sensemaking, and planned organizational change", *Journal of Applied Behavioral Science*, vol. 37, no. 2, pp. 227-251.
- Weick, K. (1979), *The Social Psychology of Organizing*, (2nd edition), McGraw-Hill, USA.

- Weick, K. E. (1993), "The collapse of sensemaking in organizations: The Mann Gulch disaster", *Administrative Science Quarterly*, vol. 38, no. 4, pp. 628.
- Weick, K.E. (1995), "Sensemaking in Organizations", Sage Publications, Thousand Oaks, California.
- Weick, K. E. and Putnam, T. (2006), "Organizing for Mindfulness: Eastern Wisdom and Western Knowledge", *Journal of Management Inquiry*, vol. 15, no. 3, pp. 275.
- Weick, K. E. and Roberts, K. H. (1993), "Collective mind in organizations: Heedful interrelating on flight decks", *Administrative Science Quarterly*, vol. 38, no. 3, pp. 357-381.
- Weick, K. E. and Sutcliffe, K. M. (2006), "Mindfulness and the Quality of Organizational Attention", *Organization Science*, vol. 17, no. 4, pp. 514.
- Weick, K. E., Sutcliffe, K. M. and Obstfeld, D. (2005), "Organizing and the Process of Sensemaking", *Organization Science*, vol. 16, no. 4, pp. 409.
- Weick, K., Sutcliffe, K. and Obstfeld, D. (1999), "Organizing for high reliability: Processes of collective mindfulness", *Res. Organizational Behavior* Vol. 21, pp. 81-123.
- Weick, K. and Sutcliffe, K. (2001), *Managing the Unexpected, Assuring High Performance in an Age of Complexity*, Jossey Bass, San Francisco.
- Werkman, R. (2010), "Reinventing Organization Development: How a Sensemaking Perspective Can Enrich OD Theories and Interventions", *Journal of Change Management*, vol. 10, no. 4, pp. 421.
- Araujo, I. and Easton, G. (1996), "Where is the Pattern?", *Organization*, Vol. 3, pp. 361-383. Cited in Dunford and Jones (2000).
- Whitehead, A.N. (1929), *Process and Reality*, New York, The Free Press, cited in Hernes and Maitlis (2010)

8 APPENDIX A – Materials studied–

This is a section of the data extracted. All the items extracted are listed in Section 3.5.

Authors	Gender of writers	Country of origin	Research/Theory question	Research or theory	Thematic focus
BOOKS					
Hernes, T. (2008), "Karl Weick on organizing and sensemaking" in Hermes, T. Understanding Organizations as Process- Theory for Tangled World, pp. 114-127, Routledge, USA.	m	UK	How Weick contributes to a processual view of organization	t	Sensemaking as process
Hernes, T. and Maitlis, S. (2010), "Process, Sensemaking, and Organizing: An Introduction", in Hermes, T. and Maitlis, S.(editors) "Process, Sensemaking And Organizing", Oxford University Press.	mf	UK	The positioning of sensemaking within process organization studies	t	Sensemaking as process and flux
Langer, E. (1989), "Mindfulness", Addison-Wesley, USA.	f	USA	Introduction of mindfulness concepts to organizational theory and practice	r & t	Mindfulness
Weick, K.E. (1995), "Sensemaking in Organizations", Sage Publications, Thousand Oaks, California.	m	USA	Description of the theory, composition and practice of sensemaking in organizations	t	Sensemaking and foundation characteristics

Authors	Gender of writers	Country of origin	Research/Theory question	Research or theory	Thematic focus
ARTICLES					
Allard-Poesi, F. (2005), "The Paradox of Sensemaking in Organizational Analysis", <i>Organization</i> , vol. 12, no. 2, pp. 169.	f	France	Examination of methodological approaches used in sensemaking research	t	Sensemaking, postmodernism
Apker, J. (2004), "Sensemaking of change in the managed care era: A case of hospital-based nurses", <i>Journal of Organizational Change Management</i> , vol. 17, no. 2, pp. 211.	f	USA	How do hospital based nurses make sense of, and understand their roles, in the change to managed care.	r	Sensemaking
Balogun, J. (2006), "Managing Changes: Steering a Course between Intended Strategies and Unanticipated Outcomes", <i>Long range planning</i> , vol. 39, no. 1, pp. 29.	f	UK	How middle manager sensemaking contributes to intended and unintended outcomes.	r	Sensemaking
Balogun, J. and Johnson, G. (2005), "From Intended Strategies to Unintended Outcomes: The Impact of Change Recipient Sensemaking", <i>Organization Studies</i> , vol. 26, no. 11, pp. 1573.	f m	UK	How lateral, informal processes of inter recipient sensemaking contribute to both unintended and intended change outcomes	r	Sensemaking
Balogun, J. and Johnson, G. (2004), "Organizational Restructuring and Middle Manager Sensemaking", <i>Academy of Management Journal</i> , vol. 47, no. 4, pp. 523.	f m	UK	How different change process lead to different patterns of schema development	r	sensemaking and schemata

Authors	Gender of writers	Country of origin	Research/Theory question	Research or theory	Thematic focus
Bartunek, J. M. (1984), "Changing Interpretive Schemes and Organizational Restructuring: The Example of a Religious Order", <i>Administrative Science Quarterly</i> , vol. 29, no. 3, pp. 355.	f	USA	How interpretative schemes undergo fundamental change in response to environmental forces	r	Interpretative schema -
Bartunek, J. M., Rousseau, D. M., Rudolph, J. W. and DePalma, J. A. (2006), "On the Receiving End: Sensemaking, Emotion, and Assessments of an Organizational Change Initiated by Others", <i>The Journal of applied behavioural science</i> , vol. 42, no. 2, pp. 182-206.	4f	USA	Investigation of how nurses deploy sensemaking to assess and understand the impact of change - exploration of the diverging perspectives of change initiators and recipients - concerned with articulating the emotional impact of change	r	Sensemaking
Bean, C. J. and Hamilton, F. E. (2006), "Leader framing and follower sensemaking: Response to downsizing in the brave new workplace", <i>Human Relations</i> , vol. 59, no. 3, pp. 321.	f (lead) m co-writer	Norway for the fieldwork - USA for analysis	What is the experience of sensemaking of nomadic workers following downsizing?	r	Sensemaking and the management of meaning - leader framing - nomadic working -

Authors	Gender of writers	Country of origin	Research/Theory question	Research or theory	Thematic focus
Czarniawska, B. (2006), "A Golden Braid: Allport, Goffman, Weick", <i>Organization Studies</i> (01708406), vol. 27, no. 11, pp. 1661-1674.	f	Sweden	origins of social psychology of organizing	T	Smk structuring of events via sensemaking
Brown, A. D. and Humphreys, M. (2003), "Epic and tragic tales: Making sense of change", <i>The Journal of applied behavioural science</i> , vol. 39, no. 2, pp. 121.	2m	UK	Investigation of the interpretation of a merger event	r	Sensemaking - use of self categorization techniques and social identity theory.
Daft, R. and Weick, K. (1984), "Towards a Model of organizations as Interpretation Systems", <i>Academy of Management Review</i> , Vol. 9, No. 2, pp. 284-291.	2m	USA	A description of organizations as systems of interpretation	t	
Dunford, R. and Jones, D. (2000), "Narrative in strategic change", <i>Human Relations</i> , vol. 53, no. 9, pp. 1207.	m f	Australia and NZ	discovering strategic change narratives - "the primary task of management is to construct a discourse of corporate coherence" 1222	r	sensemaking and sensegiving

Authors	Gender of writers	Country of origin	Research/Theory question	Research or theory	Thematic focus
Ericson, T. (2001), "Sensemaking in organizations—towards a conceptual framework for understanding strategic change", <i>Scandinavian Journal of Management</i> , vol. 17, no. 1, pp. 109-131.	m	Sweden	understanding organizational change is achieved by understanding the meaning ascribed to it by org. actors - the paper develops a conceptual framework from increasing understanding of organizational strategic change	r	sensemaking and sensegiving
Foldy, E. G., Goldman, L. and Ospina, S. (2008), "Sensegiving and the role of cognitive shifts in the work of leadership", <i>The Leadership Quarterly</i> , vol. 19, no. 5, pp. 514-529.	2f 1m	USA	A description of organizations as systems of interpretation	r	Sensegiving, leadership and cognition
George, J. M. and Jones, G. R. (2001), "Towards a process model of individual change in organizations", <i>Human Relations</i> , vol. 54, no. 4, pp. 419.	fm	USA	Macro level explanations of change and intertie overlook the micro level operation of change. Propose a micro level model founded on the way individuals construct and make sense of the organizational world	t	change is carried out by individuals - sensemaking - schema
Gioia, D. A. (2006), "On Weick: An Appreciation", <i>Organization Studies</i> (01708406), vol. 27, no. 11, pp.	m	USA	What to make of Karl Weick?	t	Sensemaking

Authors	Gender of writers	Country of origin	Research/Theory question	Research or theory	Thematic focus
1709-1721.					
Gioia, D. A. and Chittipeddi, K. (1991), "Sensemaking and Sensegiving in Strategic Change Initiation", <i>Strategic Management Journal</i> , vol. 12, no. 6, pp. 433.	2m	USA	The place of sensemaking and sensegiving in managing strategic change	r	Sensegiving and sensemaking
Gioia, D. A., Corley, K. G. and Fabbri, T. (2002), "Revising the past (while thinking in the future perfect tense)", <i>Journal of Organizational Change Management</i> , vol. 15, no. 6, pp. 622-634.	3m	USA and Italy	the intentional revision of history is important - How do strategic leaders make sense of the future?	t	Sensmaking
Gioia, D. A. and Thomas, J. B. (1996), "Identity, image, and issue interpretation: Sensemaking during strategic change in academia", <i>Administrative Science Quarterly</i> , vol. 41, no. 3, pp. 370.	2m	USA	How do top management teams in higher education institutions make sense of important issues affecting strategic change in modern academia	r	strategic sensemaking
Greenberg, D. N. (1995), "Blue versus gray: A metaphor constraining sensemaking around a restructuring", <i>Group & Organization Management. Special Issue: Organizational Studies Conference: Best papers</i> , vol. 20, no. 2, pp. 183-209.	f	USA	how undirected symbolic processes can hinder change because f their influence on sensemaking	R	Sensemaking and symbolism

Authors	Gender of writers	Country of origin	Research/Theory question	Research or theory	Thematic focus
Harris, S. G. (1994), "Organizational culture and individual sensemaking: A schema-based perspective", <i>Organization Science</i> , vol. 5, no. 3, pp. 309.	m	USA	Organizational culture's influence on individual sensemaking is revealed in organization specific schemas	t	Schema, sensemaking and organizational culture
Hill, R. C. and Levenhagen, M. (1995), "Metaphors and Mental Models: Sensemaking and Sensegiving in Innovative and Entrepreneurial Activities", <i>Journal of Management</i> , vol. 21, no. 6, pp. 1057.	2m	USA	identifies problems for CEO's in managing meaning - finding the right metaphor - entrepreneurial sensegiving 1069	t	Sensmaking, metaphors and mental models, ambiguity
Isabella, L.A. "Evolving Interpretations As A Change Unfolds: How Managers", (1990), <i>Academy of Management Journal</i> , vol. 33, no. 1, pp. 7.	f	USA	how do managers construe organizational events as change unfolds	r	Interpretation - symbolism
Levinthal, D. and Rerup, C. (2006), "Crossing an Apparent Chasm: Bridging Mindful and Less-Mindful Perspectives on Organizational Learning", <i>Organization Science</i> , vol. 17, no. 4, pp. 502.	2 m	USA/Canada	relationship between mindfulness, less mindful behaviour and the creation of routines	t	mindfulness, sensemaking and routines
Lüscher, L. and Lewis, M. (2008), "Organizational Change and Managerial Sensemaking: Working through Paradox", <i>Academy of Management Journal</i> , vol. 51, no. 2, pp. 221.	2f	USA	middle manager sensemaking during change - what is the role of paradox?	r	sensemaking - paradox

Authors	Gender of writers	Country of origin	Research/Theory question	Research or theory	Thematic focus
Maitlis, S. (2005), "The Social Processes of Organizational Sensemaking", <i>Academy of Management Journal</i> , vol. 48, no. 1, pp. 21.	f	UK	(1) Are there discernable patterns of social sensemaking in complex orgs (2) Are their patterns of accounts and action associated with different social processes of sensemaking in organizations	r	Sensemaking with a level of sensegiving
Maitlis, S. and Lawrence, T. B. (2007), "Triggers and Enablers of Sensegiving in Organizations", <i>Academy of Management Journal</i> , vol. 50, no. 1, pp. 57.	f m	Canada	what triggers and enables sensegiving	r	Sensegiving and sensemaking
Maitlis, S. and Sonenshein, S. (2010), "Sensemaking in Crisis and Change: Inspiration and Insights From Weick (1988)", <i>Journal of Management Studies</i> , vol. 47, no. 3, pp. 551-580.	f m	Canada	a reflection on an earlier work of Weick used to examine the two core themes of shared meanings and emotion that underlie sensemaking	t	sensemaking moving from crisis to change - same issues at play
Rouleau, L. (2005), "Micro-Practices of Strategic Sensemaking and Sensegiving: How Middle Managers Interpret and Sell Change Every Day", <i>The Journal of Management Studies</i> , vol. 42, no. 7, pp. 1413.		Canada		r	sensegiving, sensemaking and strategy - socio cultural aspects of sensemaking

Authors	Gender of writers	Country of origin	Research/Theory question	Research or theory	Thematic focus
Rouleau, L. and Balogun, J. (2011), "Middle Managers, Strategic Sensemaking, and Discursive Competence", <i>Journal of Management Studies</i> , vol. 48, no. 5, pp. 953-983.	2 f	Canada UK	showing how discursive competence consists of "performing the conversation" and "setting the scene"	r	discursive competence in generating sensemaking
Smircich, L & Morgan, G. (1982), "Leadership: The Management of Meaning", <i>The Journal of Applied Behavioural Science</i> , Vol.18, No. 3, pp. 257-273	f,m	use		r	management of meaning- leadership as a social practice
Stensaker, I., Falkenberg, J. and Grønhaug, K. (2008), "Implementation Activities and Organizational Sensemaking", <i>The Journal of applied behavioural science</i> , vol. 44, no. 2, pp. 162.	f	Norway	examines how implementation activities affect individual and organizational sensemaking processes contributing to a shared understanding of change	r	implementation of change and sensemaking
Stensaker, I. and Falkenberg, J. (2007), "Making sense of different responses to corporate change", <i>Human Relations</i> , vol. 60, no. 1, pp. 137.	2f	Norway	How three business units respond to the same change initiative - explains organizational outcomes by applying a micro perspective - how and why might organizational responses to change vary		change, sensemaking theory and practice

Authors	Gender of writers	Country of origin	Research/Theory question	Research or theory	Thematic focus
Thomas, J. B., Clark, S. M. and Gioia, D. A. (1993), "Strategic sensemaking and organizational performance: Linkages among scanning, interpretation, action, and outcomes", <i>Academy of Management Journal</i> , vol. 36, no. 2, pp. 239.	3m	USA	investigates the strategic sensemaking processes of scanning, interpretation and action	r	sensemaking, strategic action, link between cognition and action
Thurlow, A. and Mills, J. H. (2009), "Change, talk and sensemaking", <i>Journal of Organizational Change Management</i> , vol. 22, no. 5, pp. 459-479.	2f	Canada	how some organizational talk becomes privileged and meaningful in the constitution of org identity	r	sensemaking, talk - narrative discursiveness
Tourish, D. and Robson, P. (2006), "Sensemaking and the Distortions of Critical Upward Communication in Organizations", <i>The Journal of Management Studies</i> , vol. 43, no. 4, pp. 711.	2m	UK	failure to heed and make sense of critical upward communication (CUC) leads to iatrogenic phenomena - i.e. the worsening of organizational problems	r	sensemaking, the value of cuc, macro vs. micro sensemaking, narrative
Vaara, E. (2003), "Post-acquisition integration as sensemaking: Glimpses of ambiguity, confusion, hypocrisy, and politicization", <i>The Journal of Management Studies</i> , vol. 40, no. 4, pp. 859.	m	USA/Finland	How do the irrational features of post-acquisition integration decision making impeded organizational integration - looks at acquisition decision making from a sense making perspective	r	Sensemaking following the integration of two organizations

Authors	Gender of writers	Country of origin	Research/Theory question	Research or theory	Thematic focus
van Vuuren, M., Beelen, P. and de Jong, M. (2010), "Speaking of dominance, status differences, and identification: Making sense of a merger", <i>Journal of Occupational and Organizational Psychology</i> , vol. 83, no. 3, pp. 627.	3m	Netherlands			
Weber, K. and Glynn, M. A. (2006), "Making Sense with Institutions: Context, Thought and Action in Karl Weick's Theory", <i>Organization Studies (01708406)</i> , vol. 27, no. 11, pp. 1639-1660.	fm	USA			
Weber, P. S. and Manning, M. R. (2001), "Cause maps, sensemaking, and planned organizational change", <i>Journal of Applied Behavioral Science</i> , vol. 37, no. 2, pp. 227-251.	mf	USA	consistent criticism of Weick is been a neglect of the larger social and historical contexts in sensemaking - argued that institutional context is a necessary part of sensemaking	t	An examination of the institutional context in sensemaking in the face of Weick's neglect of the larger social and historical contexts in sensemaking
Weick, K. E. (1993), "The collapse of sensemaking in organizations: The Mann Gulch disaster", <i>Administrative Science Quarterly</i> , vol. 38, no. 4, pp. 628.	mf	USA	Why do orgs unravel and how can they be made more resilient	r	Sensemaking in a crisis

Authors	Gender of writers	Country of origin	Research/Theory question	Research or theory	Thematic focus
Weick, K. E. and Putnam, T. (2006), "Organizing for Mindfulness: Eastern Wisdom and Western Knowledge", <i>Journal of Management Inquiry</i> , vol. 15, no. 3, pp. 275.	2m	USA	An examination of mindfulness	t	Mindfulness
Weick, K. E. and Roberts, K. H. (1993), "Collective mind in organizations: Heedful interrelating on flight decks", <i>Administrative Science Quarterly</i> , vol. 38, no. 3, pp. 357-381.	mf	USA	Assessment and analysis of literature, especially Roberts' study of life on an aircraft carrier to present the concept of the collective mind to explain "organizational performance in situations requiring nearly continuous operational reliability" 357 (abstract) "heedful interrelating and mindful comprehension increase (as) organizational errors decrease" 357 (abstract)	r	Heedful interrelating as an anticipation of mindfulness
Weick, K. E. and Sutcliffe, K. M. (2006), "Mindfulness and the Quality of Organizational Attention", <i>Organization Science</i> , vol. 17, no. 4, pp. 514.	mf	USA	Addressing Levinthal & Rerup 2006 concept of mindful and less mindful behaviour to a contrast between conceptual and less conceptual - brings focus on to the quality of	t	sensemaking and mindfulness

Authors	Gender of writers	Country of origin	Research/Theory question	Research or theory	Thematic focus
attention					
Weick, K. E., Sutcliffe, K. M. and Obstfeld, D. (2005), "Organizing and the Process of Sensemaking", <i>Organization Science</i> , vol. 16, no. 4, pp. 409.	mfm	USA	Takes stock of the concept of sensemaking and its place in organizational theory - placing sensemaking as more forward looking and less sedentary	t	sensemaking, interpreting
Werkman, R. (2010), "Reinventing Organization Development: How a Sensemaking Perspective Can Enrich OD Theories and Interventions", <i>Journal of Change Management</i> , vol. 10, no. 4, pp. 421.	f	Netherlands	How can a sensemaking approach help OD practitioners better understand organizational change and enrich OD interventions	r	Sensemaking and OD

9 APPENDIX B – Table showing articles included and excluded following the reading of the full articles

The included articles are shaded 156 articles were read and 93 included.

Article	Decision and comments
Akgun, A. E., Lynn, G. S. and Byrne, J. C. (2003), "Organizational learning: A socio-cognitive framework", <i>Human Relations</i> , vol. 56, no. 7, pp. 839.	Excluded because the focus is org learning and social cognition
Allard-Poesi, F. (2005), "The Paradox of Sensemaking in Organizational Analysis", <i>Organization</i> , vol. 12, no. 2, pp. 169.	Include - postmodern perspective - paradox of social constructionism based on the collection of detailed information
Angus-Leppan, T., Metcalf, L. and Benn, S. (2010), "Leadership styles and CSR practice: An examination of sensemaking, institutional drivers and CSR leadership", <i>Journal of Business Ethics</i> , vol. 93, no. 2, pp. 189-213.	Excluded - focus is CSR leadership of which sensemaking is a component
Apker, J. (2004), "Sensemaking of change in the managed care era: A case of hospital-based nurses", <i>Journal of Organizational Change Management</i> , vol. 17, no. 2, pp. 211.	Include -deals with change and case study methodology
Avey, J., Wernsing, T. and Luthans, F. (2008), "Can Positive Employees Help Positive Organizational Change? Impact of Psychological Capital and Emotions on Relevant Attitudes and Behaviors", <i>The Journal of applied behavioral science</i> , vol. 44, no. 1, pp. 48.	Exclude - Shows positive impact of mindfulness on change via quants research but not in a specific setting or as part of change management process

Article	Decision and comments
Bakke, J. W. and Bean, C. J. (2006), "The Materiality of Sensemaking", <i>TAMARA: Journal of Critical Postmodern Organization Science</i> , vol. 5, no. 3, pp. 51-69.	Exclude - discussion of sensemaking from a postmodern perspective - challenges the cognitive emphasis of sensemaking arguing for materiality as an element.
Bakken, T. and Hernes, T. (2006), "Organizing is Both a Verb and a Noun: Weick Meets Whitehead", <i>Organization Studies</i> (01708406), vol. 27, no. 11, pp. 1599-1616.	Exclude - some contribution to theory on the process vs. entity debate
Balogun, J. (2003), "From blaming the middle to harnessing its potential: Creating change intermediaries", <i>British Journal of Management</i> , vol. 14, no. 1, pp. 69.	Include - middle managers as change agents
Balogun, J. (2006), "Managing Changes: Steering a Course between Intended Strategies and Unanticipated Outcomes", <i>Long range planning</i> , vol. 39, no. 1, pp. 29.	Include- middle managers, strategy and sensemaking
Balogun, J. and Johnson, G. (2005), "From Intended Strategies to Unintended Outcomes: The Impact of Change Recipient Sensemaking", <i>Organization Studies</i> , vol. 26, no. 11, pp. 1573.	Include - as above
Balogun, J. and Johnson, G. (2004), "Organizational Restructuring and Middle Manager Sensemaking", <i>Academy of Management Journal</i> , vol. 47, no. 4, pp. 523.	Include - as above
Baran, B. E. and Scott, C. W. (2010), "Organizing ambiguity: A grounded theory of leadership and sensemaking within dangerous contexts", <i>Military Psychology</i> , vol. 22, no. S1, pp. S40-S69.	Focused on high reliability only - exclude

Article	Decision and comments
Bartunek, J. M. (1984), "Changing Interpretive Schemes and Organizational Restructuring: The Example of a Religious Order", <i>Administrative Science Quarterly</i> , vol. 29, no. 3, pp. 355.	Interpretative schemes and a pre-cursor to sense making work - follows Daft and Weick 1984
Bartunek, J. M., Rousseau, D. M., Rudolph, J. W. and DePalma, J. A. (2006), "On the Receiving End: Sensemaking, Emotion, and Assessments of an Organizational Change Initiated by Others", <i>The Journal of applied behavioral science</i> , vol. 42, no. 2, pp. 182-206.	Include - quants research using interviews - change recipients play an active part in org change
Basu, K. and Palazzo, G. (2008), "Corporate Social Responsibility: a Process Model of Sensemaking", <i>Academy of Management. The Academy of Management Review</i> , vol. 33, no. 1, pp. 122.	Exclude - focus on CSR with insufficient detail on sensemaking to justify inclusion
Bean, C. J. and Eisenberg, E. M. (2006), "Employee sensemaking in the transition to nomadic work", <i>Journal of Organizational Change Management</i> , vol. 19, no. 2, pp. 210.	Include -employee sensemaking as a socio-systemic process
Bean, C. J. and Hamilton, F. E. (2006), "Leader framing and follower sensemaking: Response to downsizing in the brave new workplace", <i>Human Relations</i> , vol. 59, no. 3, pp. 321.	Include -ethnographic study of change to nomadic work, emotion a strong element
Bird, S. (2007), "SENSEMAKING AND IDENTITY: The Interconnection of Storytelling and Networking in a Women's Group of a Large Corporation", <i>The Journal of Business Communication</i> , vol. 44, no. 4, pp. 311.	Include -story telling, action research, ethnographic, role of leadership

Article	Decision and comments
Black, J. (1999), "Revisiting Leadership, Organizing, Generating Change, using Sensemaking, and Influencing External Perceptions", <i>Journal of Business and Entrepreneurship</i> , vol. 11, pp. III.	Exclude - focus on complexity theory - synopsis of lit for comp theory, no major conversants for sensemaking
Brown, A. D. and Humphreys, M. (2003), "Epic and tragic tales: Making sense of change", <i>The Journal of applied behavioral science</i> , vol. 39, no. 2, pp. 121.	Two different accounts of the same events - ethnographic study
Browning, L. and Boudès, T. (2005), "The use of narrative to understand and respond to complexity: A comparative analysis of the Cynefin and Weickian models", <i>Emergence: Complexity & Organization</i> , vol. 7, no. 3, pp. 35-42.	Exclude - discussion comparing Snowden with Weick as a prelude to a special edition of articles
Buchanan, D. A. (1999), "The logic of political action: An experiment with the epistemology of the particular", <i>British Journal of Management</i> , vol. 10, pp. S73.	Exclude - does not address sensemaking directly despite being in the area.
Calton, J. M. and Payne, S. L. (2003), "Coping With Paradox: Multistakeholder Learning Dialogue as a Pluralist Sensemaking Process for Addressing Messy Problems", <i>Business & Society</i> , vol. 42, no. 1, pp. 7.	Included simply because it addresses paradox
Chaudhry, A., Coyle-Shapiro, J. and Wayne, S. (2011), "A Longitudinal Study of the Impact of Organizational Change on Transactional, Relational, and Balanced Psychological Contracts", <i>Journal of Leadership & Organizational Studies</i> , vol. 18, no. 2, pp. 247.	Research into contextual factors that influence employees' psychological contracts during org. change. Uses sensemaking theory

Article	Decision and comments
Chaudhry, A., Wayne, S. J. and Schalk, R. (2009), "A Sensemaking Model of Employee Evaluation of Psychological Contract Fulfillment: When and How Do Employees Respond to Change?", <i>The Journal of applied behavioral science</i> , vol. 45, no. 4, pp. 498-520.	Include -employee relationship during organizational change - examination of employee sensemaking.
Clark, E. (2004), "Power, Action and Constraint in Strategic Management: Explaining Enterprise Restructuring in the Czech Republic", <i>Organization Studies</i> , vol. 25, no. 4, pp. 607.	Include - socio political aspect of sensemaking - but sensemaking as interpretation? Enactment of the political world is a feature.
Czarniawska, B. (2006), "A Golden Braid: Allport, Goff man, Weick", <i>Organization Studies</i> (01708406), vol. 27, no. 11, pp. 1661-1674.	Include - Theoretical discussion of W's work
Daft, R. and Weick, K. (1984), "Towards a Model of organizations as Interpretation Systems", <i>Academy of Management Review</i> , Vol. 9, No. 2, pp. 284-291.	Include
Davide, R. A. V. A. S. I. and Majken, S. C. H. U. L. T. Z. (2006), "Responding to Organizational Identity Threats: Exploring the Role of Organizational Culture", <i>Academy of Management Journal</i> , vol. 49, no. 3, pp. 433.	Include - Making sense of environmental change's impact of organisational culture
De Vos, A. and Freese, C. (2011), "Sensemaking during organizational entry: Changes in newcomer information seeking and the relationship with psychological contract fulfilment", <i>Journal of Occupational and Organizational Psychology</i> , vol. 84, no. 2, pp. 288.	Exclude - used the term "sensemaking" but did not develop it - focus of interest was the newcomer psychological contract

Article	Decision and comments
Decker, C. A. (1998), "Sensemaking in organizations", <i>Human Resource Development Quarterly</i> , vol. 9, no. 2, pp. 198.	Exclude - book review
Drazin, R., Glynn, M. A. and Kazanjian, R. K. (1999), "Multilevel theorizing about creativity in organizations: A sensemaking perspective", <i>Academy of Management Review</i> , vol. 24, no. 2, pp. 286.	Exclude - focus on creativity with some mention of sensemaking but at the periphery of the study
Dunbar, R. L. M. and Garud, R. (2009), "Distributed knowledge and indeterminate meaning: The case of the Columbia Shuttle flight", <i>Organization Studies</i> , vol. 30, no. 4, pp. 397-421.	Exclude - concerned with conflicting performance demands
Dunford, R. and Jones, D. (2000), "Narrative in strategic change", <i>Human Relations</i> , vol. 53, no. 9, pp. 1207.	Include - Sensegiving - constructing a course of corporate coherence -
Durand, R. (2003), "Predicting a firm's forecasting ability: The roles of organizational illusion of control and organizational attention", <i>Strategic Management Journal</i> , vol. 24, no. 9, pp. 821.	Exclude - off the subject,
Elsbach, K. D., Barr, P. S. and Hargadon, A. B. (2005), "Identifying Situated Cognition in Organizations", <i>Organization Science</i> , vol. 16, no. 4, pp. 422-433.	Situated cognition - recognition of context in sensemaking.
Engwall, M. and Westling, G. (2004), "Peripety in an R&D Drama: Capturing a Turnaround in Project Dynamics", <i>Organization Studies</i> , vol. 25, no. 9, pp. 1557.	Exclude - passing reference to sensemaking only

Article	Decision and comments
Ericson, T. (2001), "Sensemaking in organisations—towards a conceptual framework for understanding strategic change", <i>Scandinavian Journal of Management</i> , vol. 17, no. 1, pp. 109-131.	Include
Fleming, D. (2001), "Narrative leadership: Using the power of stories", <i>Strategy & Leadership</i> , vol. 29, no. 4, pp. 34.	Exclude - not scholarly
Foldy, E. G., Goldman, L. and Ospina, S. (2008), "Sensegiving and the role of cognitive shifts in the work of leadership", <i>The Leadership Quarterly</i> , vol. 19, no. 5, pp. 514-529.	Include - Cognitive shift as a means of understanding and describing leadership meaning making in not for profit orgs
Ford, C. M. (2002), "The futurity of decisions as a facilitator of organizational creativity and change", <i>Journal of Organizational Change Management</i> , vol. 15, no. 6, pp. 635.	Exclude theoretical work concerned with futurity - little relevance to sensemaking and change
Gardner, D. G., Dunham, R. B., Cummings, L. L. and Pierce, J. L. (1987), "Employee Focus of Attention and Reactions to Organizational Change", <i>The Journal of applied behavioral science</i> , vol. 23, no. 3, pp. 351.	Exclude - off the subject of sensemaking
George, J. M. and Jones, G. R. (2001), "Towards a process model of individual change in organizations", <i>Human Relations</i> , vol. 54, no. 4, pp. 419.	Include -Cognitive and affective processes at work in individuals to develop schemas for making sense of change
Gephart, R. (1997), "Hazardous measures: an interpretive textual analysis of quantitative sensemaking during crises", <i>Journal of Organizational Behavior</i> , vol. 18, no. 7, pp. 583-622.	Exclude -concerned with quants analysis of sensemaking in crisis

Article	Decision and comments
Gioia, D. A. (2006), "On Weick: An Appreciation", <i>Organization Studies</i> (01708406), vol. 27, no. 11, pp. 1709-1721.	Include - usefully distinguishes sensemaking and interpretation
Gioia, D. A. and Chittipeddi, K. (1991), "Sensemaking and Sensegiving in Strategic Change Initiation", <i>Strategic Management Journal</i> , vol. 12, no. 6, pp. 433.	Include - introduces sensegiving
Gioia, D. A., Corley, K. G. and Fabbri, T. (2002), "Revising the past (while thinking in the future perfect tense)", <i>Journal of Organizational Change Management</i> , vol. 15, no. 6, pp. 622-634.	Include
Gioia, D. A. and Mehra, A. (1996), "Sensemaking in Organizations", <i>Academy of Management. The Academy of Management Review</i> , vol. 21, no. 4, pp. 1226.	Include - review of Weick's (1995) book and provides background on the development of sensemaking
Gioia, D. A. and Thomas, J. B. (1996), "Identity, image, and issue interpretation: Sensemaking during strategic change in academia", <i>Administrative Science Quarterly</i> , vol. 41, no. 3, pp. 370.	Include
Gonzalez-Padron, T., Chabowski, B., Hult, G. and Ketchen, D., Jr (2010), "Knowledge Management and Balanced Scorecard Outcomes: Exploring the Importance of Interpretation, Learning and Internationality", <i>British Journal of Management</i> , vol. 21, no. 4, pp. 967.	Include - a rare article linking sensemaking to organizational PM

Article	Decision and comments
Greenberg, D. N. (1995), "Blue versus gray: A metaphor constraining sensemaking around a restructuring", <i>Group & Organization Management.Special Issue: Organizational Studies Conference: Best papers</i> , vol. 20, no. 2, pp. 183-209.	Include
Grimes, M. (2010), "Strategic Sensemaking Within Funding Relationships: The Effects of Performance Measurement on Organizational Identity in the Social Sector", <i>Entrepreneurship Theory and Practice</i> , vol. 34, no. 4, pp. 763.	Exclude - covers making sense of funding relationships - formation of org identity a key component
Harris, S. G. (1994), "Organizational culture and individual sensemaking: A schema-based perspective", <i>Organization Science</i> , vol. 5, no. 3, pp. 309.	Include
Hearn, G. and Ninan, A. (2003), "Managing change is managing meaning", <i>Management Communication Quarterly : McQ</i> , vol. 16, no. 3, pp. 440.	Exclude - short commentary
Hede, A. (2010), "The dynamics of mindfulness in managing emotions and stress", <i>Journal of Management Development</i> , vol. 29, no. 1, pp. 94-110.	Exclude - description of mindfulness only
Hill, R. C. and Levenhagen, M. (1995), "Metaphors and Mental Models: Sensemaking and Sensegiving in Innovative and Entrepreneurial Activities", <i>Journal of Management</i> , vol. 21, no. 6, pp. 1057.	Include
Holt, R. and Macpherson, A. (2010), "Sensemaking, rhetoric and the socially competent entrepreneur", <i>International Small Business Journal</i> , vol. 28, no. 1, pp. 20-42.	Exclude - peripheral

Article	Decision and comments
Hope, O. (2010), "The Politics of Middle Management Sensemaking and Sensegiving", <i>Journal of Change Management</i> , vol. 10, no. 2, pp. 195.	Include
Huby, G., Guthrie, B., Grant, S., Watkins, F., Checkland, K., McDonald, R. and Davies, H. (2008), "Whither British general practice after the 2004 GMS contract?", <i>Journal of Health Organization and Management</i> , vol. 22, no. 1, pp. 63.	Include
Hung, S. (2005), "The plurality of institutional embeddedness as a source of organizational attention differences", <i>Journal of Business Research</i> , vol. 58, no. 11, pp. 1543.	Exclude -attentional differences rather than sensemaking - no sensemaking references
Huzzard, T. (2004), "OTHER ARTICLE: Communities of domination? Reconceptualising organisational learning and power", <i>Journal of Workplace Learning</i> , vol. 16, no. 5/6, pp. 350.	Theoretical working linking change, org learning, sensemaking
Isabella, L.A. "Evolving Interpretations As A Change Unfolds: How Managers", (1990), <i>Academy of Management Journal</i> , vol. 33, no. 1, pp. 7.	precursor of the application of sensemaking to change
Issel, L. M. and Narasimha, K. M. (2007), "Creating complex health improvement programs as mindful organizations: from theory to action.", <i>Journal of Health Organization and Management</i> , vol. 21, no. 2, pp. 166.	Exclude - does not address change

Article	Decision and comments
Jeong, H. and Brower, R. (2008), "Extending the Present Understanding of Organizational Sensemaking", <i>Administration & Society</i> , vol. 40, no. 3, pp. 223.	Exclude -individual sensemaking not in a change setting
Jordan, S., Messner, M. and Becker, A. (2009), "Reflection and Mindfulness in Organizations: Rationales and Possibilities for Integration", <i>Management Learning</i> , vol. 40, no. 4, pp. 465.	links mindfulness to sensemaking
Kishore, A. and McLean, E. (2007), "Reconceptualizing Innovation Compatibility as Organizational Alignment in Secondary IT Adoption Contexts: An Investigation of Software Reuse Infusion", <i>IEEE Transactions on Engineering Management</i> , vol. 54, no. 4, pp. 756.	Exclude -not sure how this none got in here as it's completely off the subject
Klein, G., Wiggins, S. and Dominguez, C. O. (2010), "Team sensemaking", <i>Theoretical Issues in Ergonomics Science</i> , vol. 11, no. 4, pp. 304-320.	Include because it addresses social/team sensemaking albeit outside org change
Kuperman, J. C. (2003), "Using Cognitive Schema Theory in the Development of Public Relations Strategy: Exploring the Case of Firms and Financial Analysts Following Acquisition Announcements", <i>Journal of Public Relations Research</i> , vol. 15, no. 2, pp. 117-150.	brings sense giving and sensemaking together
Landau, D. and Drori, I. (2008), "Narratives as sensemaking accounts: the case of an R&D laboratory", <i>Journal of Organizational Change Management</i> , vol. 21, no. 6, pp. 701.	Include - links to challenge of staff via sensemaking

Article	Decision and comments
Levinthal, D. and Rerup, C. (2006), "Crossing an Apparent Chasm: Bridging Mindful and Less-Mindful Perspectives on Organizational Learning", <i>Organization Science</i> , vol. 17, no. 4, pp. 502.	Include
Lines, R. (2007), "Using Power to Install Strategy: The Relationships between Expert Power, Position Power, Influence Tactics and Implementation Success", <i>Journal of Change Management</i> , vol. 7, no. 2, pp. 143.	Include - Possibly demonstrates that the more powerful the position of the change agent the less likely they are to engage in sensegiving/sensemaking. First development of a scale for sensemaking but peripheral
Long, B. S. and Mills, J. H. (2010), "Workplace spirituality, contested meaning, and the culture of organization", <i>Journal of Organizational Change Management</i> , vol. 23, no. 3, pp. 325.	Exclude - Could come back to it if I need a pm critique
Lundberg, C. C. (2005), "Indwelling Strategic Thinking: Mindsets and Sensemaking", <i>International Journal of Organizational Analysis</i> , vol. 13, no. 4, pp. 286.	Include - thought piece and examination of the lit on sensemaking in strategic change
Lüscher, L. and Lewis, M. (2008), "Organizational Change and Managerial Sensemaking: Working through Paradox", <i>Academy of Management Journal</i> , vol. 51, no. 2, pp. 221.	include
Maitlis, S. (2005), "The Social Processes of Organizational Sensemaking", <i>Academy of Management Journal</i> , vol. 48, no. 1, pp. 21.	include

Article	Decision and comments
Maitlis, S. and Lawrence, T. B. (2007), "Triggers and Enablers of Sensegiving in Organizations", <i>Academy of Management Journal</i> , vol. 50, no. 1, pp. 57.	include
Maitlis, S. and Sonenshein, S. (2010), "Sensemaking in Crisis and Change: Inspiration and Insights From Weick (1988)", <i>Journal of Management Studies</i> , vol. 47, no. 3, pp. 551-580.	include
Manning, P. K. (1997), "Organizations as Sense-Making Contexts", <i>Theory, Culture & Society</i> , vol. 14, no. 2, pp. 139-150.	include
Mark van Vuuren and Wim J.L. Elving (2008), "Communication, sensemaking and change as a chord of three strands: Practical implications and a research agenda for communicating organizational change", <i>Corporate Communications: An International Journal</i> , vol. 13, no. 3, pp. 349-359.	include
Marmenout, K. (2010), "Employee Sensemaking in Mergers: How Deal Characteristics Shape Employee Attitudes", <i>The Journal of applied behavioral science</i> , vol. 46, no. 3, pp. 329.	include
Martins, L. L. (2005), "A Model of the Effects of Reputational Rankings on Organizational Change", <i>Organization Science</i> , vol. 16, no. 6, pp. 701-720.	exclude - peripheral

Article	Decision and comments
May, Workman and Jones (2008), "Organizing Attention: Responses of the Bureaucracy to Agenda Disruption", <i>Journal of Public Administration Research and Theory</i> , vol. 18, no. 4, pp. 517.	exclude - peripheral, does not address sensemaking directly
McDaniel, R., Jr (2007), "Management Strategies for Complex Adaptive Systems: Sensemaking, Learning, and Improvisation", <i>Performance Improvement Quarterly</i> , vol. 20, no. 2, pp. 21.	exclude - peripheral
McGaw, N. (2005), "Developing leaders for a sustainable global society", <i>Strategic HR Review</i> , vol. 4, no. 6, pp. 32.	exclude - peripheral
Miller, G. E. (2003), "Review of <i>Making sense of organizational change</i> ", <i>Personnel Psychology</i> , vol. 56, no. 4, pp. 1060-1064.	exclude - book review
Mills, J. H. (2005), "Organizational Change and Representations of Women in a North American Utility Company", <i>Gender, Work and Organization</i> , vol. 12, no. 3, pp. 242-269.	include
Mills, J. H., Thurlow, A. and Mills, A. J. (2010), "Making sense of sensemaking: the critical sensemaking approach", <i>Qualitative Research in Organizations and Management</i> , vol. 5, no. 2, pp. 182.	include - critique of Weick
Moon, M. Y. (2009), "Making sense of common sense for change management buy-in", <i>Management Decision</i> , vol. 47, no. 3, pp. 518-532.	exclude - peripheral

Article	Decision and comments
Moss, M. (2001), "Sensemaking, complexity and organizational knowledge", <i>Knowledge and Process Management</i> , vol. 8, no. 4, pp. 217.	exclude - focus of sensemaking in a context other than org. change
Mumford, M., Friedrich, T., Caughron, J. and Byrne, C. (2007), "Leader cognition in real-world settings: How do leaders think about crises?", <i>Leadership Quarterly</i> , vol. 18, no. 6, pp. 515.	exclude - peripheral
Narayanan, V. K., Zane, L. J. and Kemmerer, B. (2011), "The cognitive perspective in strategy: An integrative review", <i>Journal of Management</i> , vol. 37, no. 1, pp. 305-351.	included because it is a good example of a systematic review
Neill, S., McKee, D. and Rose, G. M. (2007), "Developing the organization's sensemaking capability: Precursor to an adaptive strategic marketing response", <i>Industrial Marketing Management</i> , vol. 36, no. 6, pp. 731-744.	exclude - not concerned with change
Nilsson, T. (2010), "The reluctant rhetorician: senior managers as rhetoricians in a strategic change context", <i>Journal of Organizational Change Management</i> , vol. 23, no. 2, pp. 137.	exclude - only peripherally related to sensegiving
O'Connell, D. (1998), "Sensemaking in organizations", <i>Administrative Science Quarterly</i> , vol. 43, no. 1, pp. 205.	Exclude - book review
O'Leary, M. and Chia, R. (2007), "Epistemes and Structures of Sensemaking in Organizational Life", <i>Journal of Management Inquiry</i> , vol. 16, no. 4, pp. 392.	Include

Article	Decision and comments
Orton, J. D. (2000), "Enactment, Sensemaking and Decision Making: Redesign Processes in the 1976 Reorganization of Us Intelligence", <i>Journal of Management Studies</i> , vol. 37, no. 2, pp. 213-234.	Include
Patriotta, G. (2003), "Sensemaking on the shop floor: Narratives of knowledge in organizations", <i>The Journal of Management Studies</i> , vol. 40, no. 2, pp. 349.	exclude - not focused on managed change
Peirano-Vejo, M. and Stablein, R. (2009), "Constituting Change and Stability: Sense-making Stories in a Farming Organization", <i>Organization</i> , vol. 16, no. 3, pp. 443.	exclude - not focused on managed change
Petranker, J. (2005), "The When of Knowing", <i>Journal of Applied Behavioral Science</i> , vol. 41, no. 2, pp. 241-259.	include - contribution to theory on the relationship between sensemaking and knowledge
Plambeck, N. and Weber, K. (2010), "When the glass is half full and half empty: CEOs' ambivalent interpretations of strategic issues", <i>Strategic Management Journal</i> , vol. 31, no. 7, pp. 689.	Include
Pye, A. (2005), "Leadership and organizing: Sensemaking in action", <i>Leadership</i> , vol. 1, no. 1, pp. 31-50.	Exclude - only peripheral on change and sensemaking - main focus is leadership
Raes, A. M. L., Glunk, U., Heijltjes, M. G. and Roe, R. A. (2007), "Top management team and middle managers: Making sense of leadership", <i>Small Group Research</i> , vol. 38, no. 3, pp. 360-386.	Exclude - only peripheral on change - main focus is leadership

Article	Decision and comments
Raghavendran, S. and Rajagopalan, P. S. (2011), "Sensemaking of complexity: leadership in financial services", <i>The Journal of business strategy</i> , vol. 32, no. 3, pp. 19.	Exclude not scholarly
Randall, K. R., Resick, C. J. and DeChurch, L. A. (2011), "Building team adaptive capacity: The roles of sensegiving and team composition", <i>Journal of Applied Psychology</i> , vol. 96, no. 3, pp. 525-540.	include
Reissner, S. C. (2010), "Change, meaning and identity at the workplace", <i>Journal of Organizational Change Management</i> , vol. 23, no. 3, pp. 287.	Include
Rice, R. (2008), "Unusual Routines: Organizational (Non)Sensemaking", <i>Journal of Communication</i> , vol. 58, no. 1, pp. 1.	Exclude - address not research
Rouleau, L. (2005), "Micro-Practices of Strategic Sensemaking and Sensegiving: How Middle Managers Interpret and Sell Change Every Day", <i>The Journal of Management Studies</i> , vol. 42, no. 7, pp. 1413.	Include
Rouleau, L. and Balogun, J. (2011), "Middle Managers, Strategic Sensemaking, and Discursive Competence", <i>Journal of Management Studies</i> , vol. 48, no. 5, pp. 953-983.	Include - significant conversant
Roux-Dufort, C. (2007), "Is crisis management (only) a management of exceptions?", <i>Journal of Contingencies and Crisis Management</i> , vol. 15, no. 2, pp. 105-114.	Exclude - peripheral

Article	Decision and comments
<p>Rovio-Johansson, A. (2007), "Post-acquisition integration: ways of sensemaking in a management team meeting", <i>Qualitative Research in Organizations and Management</i>, vol. 2, no. 1, pp. 4.</p>	<p>Include</p>
<p>Schneider, S. C. (1997), "Interpretation in organizations: Sensemaking and strategy", <i>European Journal of Work and Organizational Psychology</i>, vol. 6, no. 1, pp. 93-102.</p>	<p>Exclude - concerned with strategic interpretation and not strategic change</p>
<p>Schwandt, D. R. (2005), "When Managers Become Philosophers: Integrating Learning With Sensemaking", <i>Academy of Management Learning & Education</i>, vol. 4, no. 2, pp. 176-192.</p>	<p>Exclude - focus on org learning rather than change</p>
<p>Scroggins, W. A. (2006), "Managing Meaning for Strategic Change: the Role of Perception and Meaning Congruence", <i>Journal of health and human services administration</i>, vol. 29, no. 1/2, pp. 83.</p>	<p>Exclude - does not directly address sensemaking</p>
<p>Seiling, J. and Hinrichs, G. (2005), "MINDFULNESS AND CONSTRUCTIVE ACCOUNTABILITY AS CRITICAL ELEMENTS OF EFFECTIVE SENSEMAKING: A New Imperative for Leaders as Sensemanagers", <i>Organization Development Journal</i>, vol. 23, no. 3, pp. 82-88.</p>	<p>Exclude - not scholarly</p>

Article	Decision and comments
Skalen, P., Quist, J., Edvardsson, B. and Enquist, B. (2005), "The contextualization of human resource and quality management: a sensemaking perspective on everybody's involvement", <i>The International Journal of Human Resource Management</i> , vol. 16, no. 5, pp. 736.	Include
Smerek, R. (2011), "Sensemaking and sensegiving: An exploratory study of the simultaneous "being and learning" of new college and university presidents", <i>Journal of Leadership & Organizational Studies</i> , vol. 18, no. 1, pp. 80-94.	Include
Smircich, L & Morgan, G. (1982), "Leadership: The Management of Meaning", <i>The Journal of Applied Behavioral Science</i> , Vol.18, No. 3, pp 257-273	Significant precursor on the literature of sensegiving.
Smircich, L. and Stubbart, C. (1985), "Strategic management in an enacted world", <i>The Academy of Management Review</i> , vol. 10, no. 4, pp. 724-736.	Include - useful early paper on organization's enactment of strategy
Smith, A. D., Plowman, D. A. and Duchon, D. (2010), "Everyday Sensegiving: A Closer Look at Successful Plant Managers", <i>The Journal of applied behavioral science</i> , vol. 46, no. 2, pp. 220-244.	Include - focus on sensegiving techniques
Smith, J. G. (2009), "NFL head coaches as sensegiving change agents", <i>Team Performance Management</i> , vol. 15, no. 3/4, pp. 202.	Include, links sensegiving and sensemaking to change management

Article	Decision and comments
Snell, R. S. (2002), "The learning organization, sensegiving and psychological contracts: A Hong Kong case", <i>Organization Studies</i> , vol. 23, no. 4, pp. 549.	Exclude - focus mainly on org learning
Sonenshein, S. (2009), "Emergence of Ethical Issues During Strategic Change Implementation", <i>Organization Science</i> , vol. 20, no. 1, pp. 223.	Include
Starzbuck & Mezas (obtain data from other computer)	
Steinthorsson, R. S. and Söderholm, A. (2002), "Strategic management as multi-contextual sensemaking in intermediate organizations", <i>Scandinavian Journal of Management</i> , vol. 18, no. 2, pp. 233-248.	Exclude - predominantly concerned with strategy
Stensaker, I., Falkenberg, J. and Grønhaug, K. (2008), "Implementation Activities and Organizational Sensemaking", <i>The Journal of applied behavioral science</i> , vol. 44, no. 2, pp. 162.	Include
Stensaker, I. and Falkenberg, J. (2007), "Making sense of different responses to corporate change", <i>Human Relations</i> , vol. 60, no. 1, pp. 137.	Include - same subject matter as above - use quality assessment to decide
Sullivan, B. (2010), "Competition and Beyond: Problems and Attention Allocation in the Organizational Rulemaking Process", <i>Organization Science</i> , vol. 21, no. 2, pp. 432.	Exclude - does not directly address sensemaking
Taylor, J. R. and Robichaud, D. (2004), "Finding the Organization in the Communication: Discourse as Action and Sensemaking", <i>Organization</i> , vol. 11, no. 3, pp. 395.	Include

Article	Decision and comments
Thomas, J. A. and McDaniel, J., Reuben R. (1990), "Interpreting Strategic Issues: Effects of Strategy and the Information-Processing Structure of Top Management Teams", <i>Academy of Management Journal</i> , vol. 33, no. 2, pp. 286-306.	Exclude - focus is on senior management strategy development
Thomas, J. B., Clark, S. M. and Gioia, D. A. (1993), "Strategic sensemaking and organizational performance: Linkages among scanning, interpretation, action, and outcomes", <i>Academy of Management Journal</i> , vol. 36, no. 2, pp. 239.	Include
Thomas, J. B., Sussman, S. W. and Henderson, J. C. (2001), "Understanding "strategic learning": Linking organizational learning, knowledge management, and sensemaking", <i>Organization Science</i> , vol. 12, no. 3, pp. 331.	Exclude - sensemaking issues only peripherally linked to change
Thurlow, A. and Mills, J. H. (2009), "Change, talk and sensemaking", <i>Journal of Organizational Change Management</i> , vol. 22, no. 5, pp. 459-479.	Include
Tomlinson, F. and Egan, S. (2002), "Organizational sensemaking in a culturally diverse setting: Limits to the 'valuing diversity' discourse", <i>Management Learning</i> , vol. 33, no. 1, pp. 79.	Exclude - not concerned with org change
Tourish, D. and Robson, P. (2006), "Sensemaking and the Distortions of Critical Upward Communication in Organizations", <i>The Journal of Management Studies</i> , vol. 43, no. 4, pp. 711.	Include - theoretical piece looking back at the lit to explore critical upward communication

Article	Decision and comments
Tuggle, C., Sirmon, D., Reutzel, C. and Bierman, L. (2010), "Commanding board of director attention: investigating how organizational performance and CEO duality affect board members' attention to monitoring", <i>Strategic Management Journal</i> , vol. 31, no. 9, pp. 946.	Exclude - concerned with senior management perception - does not cover sensemaking or org change
Tyler, C. (2005), "Metaphor and Management: Making Sense of Change", <i>Management in Education</i> , vol. 19, no. 3, pp. 28-32.	use of metaphors during strategic change
Vaara, E. (2003), "Post-acquisition integration as sensemaking: Glimpses of ambiguity, confusion, hypocrisy, and politicization", <i>The Journal of Management Studies</i> , vol. 40, no. 4, pp. 859.	post-acquisition ethnographic examination of sensemaking
Valentine, S., Godkin, L. and Varca, P. (2010), "Role Conflict, Mindfulness, and Organizational Ethics in an Education-Based Healthcare Institution", <i>Journal of Business Ethics</i> , vol. 94, no. 3, pp. 455.	Include - covers the link between mindfulness and sensemaking but not in a change setting
van Vuuren, M., Beelen, P. and de Jong, M. (2010), "Speaking of dominance, status differences, and identification: Making sense of a merger", <i>Journal of Occupational and Organizational Psychology</i> , vol. 83, no. 3, pp. 627.	Include -use of sensemaking in the merger of two SA universities

Article	Decision and comments
van Vuuren, M. and Elving, W. J. L. (2008), "Communication, sensemaking and change as a chord of three strands: Practical implications and a research agenda for communicating organizational change", <i>Corporate Communications</i> , vol. 13, no. 3, pp. 349-359.	Include
Wagner III, J. A. and Gooding, R. Z. (1997), "Equivocal Information and Attribution: an Investigation of Patterns of Managerial Sensemaking", <i>Strategic Management Journal</i> , vol. 18, no. 4, pp. 275-286.	Exclude - not related to change although of interest to PM - managers believe what they want to believe and construct meaning accordingly
Warner, M. (1996), "Sensemaking in Organizations", <i>Human Systems Management</i> , vol. 15, no. 2, pp. 147.	Exclude - book review
Weber, K. and Glynn, M. A. (2006), "Making Sense with Institutions: Context, Thought and Action in Karl Weick's Theory", <i>Organization Studies</i> (01708406), vol. 27, no. 11, pp. 1639-1660.	Include discussion of macro institutionalisation and the role of sensemaking at micro and macro levels.
Weber, P. S. and Manning, M. R. (2001), "Cause maps, sensemaking, and planned organizational change", <i>Journal of Applied Behavioral Science</i> , vol. 37, no. 2, pp. 227-251.	Include -Cause maps as a way of charting sensemaking during change
Weick, K. (2007), "Nowhere Leads to Somewhere", <i>Conference Board Review</i> , vol. 44, no. 2, pp. 14-15.	Exclude - not scholarly
Weick, K. E. (1993), "The collapse of sensemaking in organizations: The Mann Gulch disaster", <i>Administrative Science Quarterly</i> , vol. 38, no. 4, pp. 628.	Include

Article	Decision and comments
Weick, K. E. and Putnam, T. (2006), "Organizing for Mindfulness: Eastern Wisdom and Western Knowledge", <i>Journal of Management Inquiry</i> , vol. 15, no. 3, pp. 275.	Include
Weick, K. E. and Roberts, K. H. (1993), "Collective mind in organizations: Heedful interrelating on flight decks", <i>Administrative Science Quarterly</i> , vol. 38, no. 3, pp. 357-381.	Include - links mindfulness with sensemaking
Weick, K. E. and Sutcliffe, K. M. (2006), "Mindfulness and the Quality of Organizational Attention", <i>Organization Science</i> , vol. 17, no. 4, pp. 514.	Include
Weick, K. E., Sutcliffe, K. M. and Obstfeld, D. (2005), "Organizing and the Process of Sensemaking", <i>Organization Science</i> , vol. 16, no. 4, pp. 409.	Include
Weick, K. E., Sutcliffe, K. M. and Obstfeld, D. (1999), "Organizing for High Reliability: Processes of Collective Mindfulness", <i>Research in Organizational Behavior</i> , vol. 21, pp. 81.	Include
Weick, K., Sutcliffe, K. and Obstfeld, D. (2000), "High Reliability: The Power of Mindfulness", <i>Leader to Leader</i> , vol. 2000, no. 17, pp. 33-38.	Exclude - not scholarly
Werkman, R. (2010), "Reinventing Organization Development: How a Sensemaking Perspective Can Enrich OD Theories and Interventions", <i>Journal of Change Management</i> , vol. 10, no. 4, pp. 421.	Use of sensemaking in OD interventions

Article	Decision and comments
Wright, A. (2005), "The role of scenarios as prospective sensemaking devices", <i>Management Decision</i> , vol. 43, no. 1, pp. 86-101.	Include - describes a method that has been applied to non HR sensemaking
Wright, C. R. and Manning, M. R. (2004), "Resourceful Sensemaking in an Administrative Group", <i>Journal of Management Studies</i> , vol. 41, no. 4, pp. 623-643.	Include - develops the concept of resourceful sensemaking
Wrzesniewski, A., Dutton, J. E. and Debebe, G. (2003), "Interpersonal Sensemaking and the Meaning of Work", <i>Research in Organizational Behavior</i> , vol. 25, pp. 93-135.	Include as a contribution to sensemaking methods